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GOVERNMENT OF NORTHERN IRELAND
MINISTRY OF AGRICULTURE

MONTHLY REPORT

JUNE, 1939.

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GOVERNMENT OF NORTHERN IRELAND
MINISTRY OF AGRICULTURE

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MINISTRY OF AGRICULTURE

MONTHLY REPORT

JUNE, 1939.

As will be gathered from the notes on agricultural conditions, the country is badly in need of rain, but at the time of writing the weather shows signs of breaking and the long period of complete drought—which constitutes a recent record for late spring—is likely to end soon. Already some local showers have been greatly welcomed by farmers, and it is hoped there are more to follow soon so that growth may be given a much-needed stimulus.

In view of the doubts still existing among some farmers as to the provisions of the scheme of grants for the ploughing up of grassland, and that outlined for subsidies for barley and oats, short explanations of the proposals are given in each case (see page 95), whilst in regard to the utilisation of the ploughed grassland advice is given in the supplementary notes commencing on page 96. Similarly, mention is made of the proposed scheme of deficiency payments for fat sheep and lambs (see page 100).

The special article in this issue deals with the marketing of dead pigs. Here the grading results in 1938 are given for pig carcases sold by producers to roll and ham curers, and a scrutiny of the tables should provide an interesting study for those readers who are concerned in the development of the industry. The most pleasing feature which stands out in these returns is that the production of quality pigs has shown a further appreciable increase on the year, and, following on the steady improvement made in this connection since the inception of the scheme, gives good reason to hope that Northern Ireland will fully maintain its prominent position on the British market.

AGRICULTURAL CONDITIONS.

AGRICULTURAL CONDITIONS AT 1st JUNE, 1939.

The past month was remarkably fine and dry and favourable for outdoor work on the farm, with the result that seasonal tillage operations were brought up to date in nearly all districts. Some rain fell on a number of days during the first three weeks of May, but latterly conditions have been extremely dry and hot. Day temperatures which were on the low side at the beginning of the month rose steadily with the increasing hours of sunshine, and the last ten days marked a period of very dry and warm weather, the thermometer registering high summer levels.

Despite the general favourableness of the weather for finishing off arrears of seasonal work, agricultural conditions are not entirely satisfactory at present as the general absence of rain is being felt in most areas where growing crops are making slow progress and pastures are showing brown and bare of grass. This is particularly true of the light soil districts, where also on account of the absence of sufficient moisture during the warm weather the hay crop is expected to be light following on a period of slow growth in April. The brairds of the grain crops have generally been retarded in development and late sowings were reported to be thin and bare in places. Turnips have not brairded satisfactorily, and it is feared that some of the sowings may prove a failure. Hard soil conditions have also militated against successful tillage work, particularly in regard to the sowing of this crop.

Among the varied activities of the farmer last month was the making of further applications of lime and, to a much lesser degree, of basic slag to land under tillage. It is gratifying to note that the Land Fertility Scheme is being availed of to an increasing extent for the improvement of agricultural land, and the financial assistance thus given, together with the proposals of further monetary help, for the ploughing up of grassland, should in time confer a great benefit to the country, not alone by increasing its productive capacity but by raising the standards of quality of the crop produce and live stock.

All classes of cattle and sheep continued in good condition, and only very slight outbreaks of seasonal ailments were reported. With the grass continuing short of requirements, cattle were not making as rapid a thrive as usual, and in a few instances hand-feeding had to be continued. The lack of good succulent grass was also reflected to some extent in the milk yields of the dairy herds, some of which failed to register the normal seasonal increase. Sheep and lambs also were maintained in a good healthy condition. There was a general improvement in the trade for store and fat cattle and for sheep during May, but dairy cattle generally were in dull request excepting the best types of young cows. Latterly the drought adversely affected the

demand for store cattle, and buyers were only interested in large forward cattle for early finishing. The hot weather also reacted unfavourably on the consumption of beef, and the upward trend of prices was checked. The sheep trade, however, was steady to firm, young lambs of finish selling readily at fairly steady rates.

Stocks of home-grown foods were used to a larger extent than usual on some farms where grass was scarce on account of the drought, but there are still fair supplies generally available in the country. Purchased feeding stuffs remained plentiful, and price movements were, as a rule, slight and in a downward direction.

As indicated, rain is now badly needed to stimulate growth, and its arrival is eagerly awaited also by stock owners whose anxiety is increasing with the fear of a shortage of water in some districts.

THE CROPS.

WHEAT.—The smaller area under this crop was generally looking well and the brairds of both autumn and spring sown wheat were in a healthy condition, although in some districts they were reported to be thin in places, more especially on heavy soils. The dry weather has not yet had much adverse effect on the young wheat plants, but rain is now needed, and if the present drought is long continued the crop will suffer.

Only small quantities of wheat were marketed last month, and prices remained at previous levels of from 5/6d. to 6/3d. per cwt.

OATS.—The sowing of the oat crop was completed under favourable conditions during the first half of May. According to present estimates the total area sown appears to be much the same as that in 1938. The brairds of early-sown oats were generally in a very satisfactory state and, except in a comparatively few instances, little damage had been done by leather-jacket grubs, although attacks were becoming more severe towards the close of the month. The lack of moisture was also beginning to tell on the brairds, and a break in the weather would now be very welcome.

The quantities of white oats sold at markets decreased during May. Prices remained at previous levels and averaged 5/5½d. per cwt. for the month. Small supplies of oat straw were marketed, and quotations fluctuated around previous levels, but on average prices were lower than in April at 39/7d. per ton.

BARLEY.—It was reported that in the barley-growing districts the acreage under this crop had been slightly increased since last year and that the brairds were, as a rule, strong and good, but in some cases rather too thick. In most districts present indications show that rain is badly needed for this crop.

FLAX.—It is difficult to gauge the extent of the area sown under flax this year; increases were reported from some districts, but on the other hand it seems that there was a tendency in the other direction in others. Sowings were completed before the end of May, and the brairds are looking very well, although the crop is in need of rain.

HAY.—The cold winds in April and the early part of May, combined with the recent drought, have resulted in a very backward state of growth in both the upland and meadow crops, and unless there is rain in the immediate future it is feared that the yields will be light. Many crops are rather thin and likely to give only small yields.

The quantities of hay marketed recorded considerable decreases during last month, and prices which had an upward trend averaged 62/7d. per ton for upland, and 52/6d. for meadow hay, which are slightly firmer than the previous month's figures.

MANGELS.—The sowing of this crop was practically completed by the middle of May, and the brairds are now in a promising condition on most farms.

TURNIPS.—The sowing of the turnip crop is nearing completion in most districts. Crops sown early have brairded well, but the later sowings have not yet brairded on account of the drought, and if rain does not come soon some fields may have to be re-sown.

POTATOES.—With the weather favourable for field work during May very good progress was made with the planting of the crop, and it was completed by the end of the month. It was also learned that in many cases grubbing and hoeing have already been done. From reports received it seems probable that the acreage of this year's potato crop may be slightly below that of 1938.

The tubers in store were generally not keeping as well as they did last year, but considering the severe weather conditions of the past winter the keeping qualities are often surprisingly good.

The quantities of potatoes shipped to Great Britain from Northern Ireland ports last month decreased rapidly and remained considerably below the figures for the corresponding period of 1938. The prices paid to growers also declined during the month by as much as £1 per ton in the case of many varieties. Figures regarding the shipments of potatoes during May and the latest prices are given below.

SHIPMENTS TO GREAT BRITAIN.

Week ended	*Tons*	*Week ended*	*Tons*
6th May, 1939	... 4,040	7th May, 1938	... 8,529
13th " "	... 4,359	14th " "	... 6,884
20th " "	... 3,282	21st " "	... 5,653
27th " "	... 2,525	28th " "	... 3,656

Growers' prices per ton during the week ended 3rd June.

WARE.

Variety	*Bagged*	*Loose*
Up-to-Date	£1 10 0 to £2 5 0	£1 5 0 to £2 0 0
Arran Banner	£1 10 0 to £2 0 0	£2 15 0
Arran Victory	£1 10 0 to £2 5 0	£1 5 0 to £2 0 0
Kerr's Pink	£1 15 0 to £2 15 0	
Majestic	£1 17 6	

Supplies of ware potatoes at local markets decreased steadily during last month and prices eased. The average quotation of 3/3d. per cwt. for all main crop varieties was 3¼d. lower on the month, while that for the principal variety, Arran Victory, was similarly reduced to 3/2d., and Kerr's Pink was 5d. cheaper at 3/4¼d. per cwt.

Other Vegetables.—Supplies of pamphrey at local markets during May were larger than in the previous month, and whilst cauliflowers were little altered in supply, savoys, leeks, parsley, carrots, parsnips and garden turnips were scarcer than in April. The average prices, weighted on the quantities marketed, generally showed only slight variations. Pamphrey cheapened by 4½d. to 1/7½d., while savoys improved by 1½d. to 2/-, and cauliflowers were unchanged in price at 3/- per dozen. Leeks cheapened by ½d. to 9d., and parsley by ¼d. to 1/5¾d. per bunch. Carrots at 11/7½d. were 2d. per cwt. cheaper on the month, parsnips firmed by 4½d. to 9/- per cwt., and garden turnips were unchanged at 1/- per cwt.

LIVE STOCK.

Cattle.—The health of store cattle remained satisfactory, and whilst their condition showed a general improvement with the spring of pastures, some animals were somewhat retarded in growth as weather conditions have resulted in grass remaining rather poor in many districts. On these farms hand-feeding had to be continued on a larger scale than usual, but as a rule little hand-feeding was done in the latter part of May, except in the case of fattening cattle. Cattle generally fared quite well, and recovered to some extent from the effects of the severe climatic conditions earlier in the year, but rain to stimulate the growth of pastures is needed if the improvement is to be maintained.

The offerings of store cattle at fairs last month were generally of medium dimensions, and the quality of the stock showed some improvement. Prices for the best animals were fully up to recent levels, but inferior cattle barely held to late rates.

Dairy cattle were maintained in good health during May, and with the cows out on grass the animals improved in condition and the milk yields increased. In some areas, however, the seasonal increase in the milk yields

was not as pronounced as usual owing to the shortage of grass, and rain would be very welcome on most dairy farms. Calving has been normally satisfactory, but as usual a few cases of sterility and abortion have been reported.

The supplies of dairy stock at Northern Ireland fairs during May remained rather below average, and with quality variable, trade ruled dull, and only the best beasts fetched late rates.

SHEEP.—In many areas the crop of lambs was even better this year than last, but in others it was scarcely as large. Taken all over, this season's crop seems to have been even more satisfactory than was last season's, and in some flocks the proportion of twins was very high. Weather conditions were, on the whole, satisfactory, but the lack of fresh, succulent grass, due to the drought, has affected some flocks.

The supplies of sheep and lambs at fairs in Northern Ireland generally remained rather small for the season, while the offerings at the Belfast marts were, as a rule, above average dimensions. Trade was fairly good, especially for the best of this season's lambs, and prices had a slightly downward trend.

PIGS.—The normal offerings of young pigs were a steady trade throughout last month, and prices ruled firm at from 22/- to 45/- each according to age and quality. Small to medium supplies of breeding sows at fairs encountered a variable demand at slightly cheaper quotations of from £4 10s. 0d. to £11 per head according to type and condition.

The weekly returns of (1) shipments of live pigs to Great Britain, and (2) purchases of dead and live pigs in Northern Ireland last month are compared hereunder, with the corresponding details for 1938 in brackets.

Week ended	(1) Shipments to Great Britain.		(2) Bought dead and alive for curing in Northern Ireland.				Total	
			Dead		Alive			
1939								
6th May	978	(1,264)	8,436	(9,331)	5,659	(3,258)	15,073	(13,853)
13th May	986	(1,265)	8,941	(9,309)	5,676	(3,038)	15,603	(13,612)
20th May	954	(1,208)	8,726	(9,581)	5,486	(3,378)	15,166	(14,167)
27th May	902	(1,415)	8,442	(9,759)	4,941	(3,560)	14,285	(14,734)
21 weeks ended 27th May	20,839	(39,561)	172,318	(183,293)	117,754	(60,636)	310,911	(283,490)

POULTRY.—At local markets the supplies of live poultry offered during May included reduced numbers of chickens and hens, and a larger number of ducks. The average price of chickens per head was ¼d. cheaper than in April at 2/11d. and that for hens firmed by a similar margin to 1/8½d., whilst ducks improved in price by 4d. to 2/5¾d. From returns collected from the wholesale merchants, prices generally showed little change during May from the previous month's levels, and the general ranges of prices obtained by producers on a live weight basis were:—Large chickens, 9d. to 11d.; medium chickens, 7½d. to 8½d.; hens and ducks, 5d. to 7d.; and ducklings, 1/- per lb.

Horses.—Farm horses were exposed for sale in rather larger numbers during May than was the case in recent months, and trade generally ruled on firmer lines and prices were better at a general range of from £18 to £45 for good working horses with an extreme top of £50 for really first class animals. Older horses fetched from £5 to £28 according to age and quality. Unbroken colts of from two to three years old realised from £16 to £30, and foals from £10 to £15 per head.

DAIRY PRODUCE.

Milk.—The seasonal improvement in milk yields was rather less marked than usual last month, as the poor state of many pastures had a retarding effect on milk production. In many cases, however, the quantities of milk available were well up to normal. If the supplies of milk are to be maintained at normal seasonal levels, rain will be needed in the immediate future.

The prices paid by creameries for milk delivered during May were slightly lower than those ruling in the previous month, and ranged from 3¾d. to 6d. per gallon, the separated milk being returned to the farmer. As the average price paid for milk produced in Northern Ireland and delivered to creameries for manufacturing purposes during the month of April, 1939, exceeded the standard price provided for by the Milk and Milk Products Acts (Northern Ireland), 1934 to 1938, no equalisation payments will be made in respect of that month.

Butter.—Supplies of farmers' print and lump butter were more plentiful at markets during last month than in April, and while the average price of print butter cheapened by ¼d. to 1/3¼d. per lb. that for lump improved by a similar margin to 1/1¾d. per lb.

Eggs.—At certain representative market centres in Northern Ireland the total supplies of hen eggs offered in May were somewhat lighter than in April, while duck eggs showed little change. The prices as fixed by the Ministry of Agriculture for eggs had an easier tendency during the latter half of the month, but finished firmer, as shown in the table on page 106.

MARKETING OF DEAD PIGS.

GRADING RESULTS IN 1938.

The scheme introduced by the Ministry, with the support of the Bacon Marketing Board and the Pigs Marketing Board, in December, 1934, prescribed definite standards of measurement in addition to weight standards. The measurement standards were based on the depth of fat at the shoulder of the pig.

Since then certain amending Orders have been introduced, and the complete table of measurements for the various grades now in force are given hereunder. The grading is carried out at the curing factories by Veterinary Officers of the Ministry, the cost of the service being shared by the Pigs Marketing Board and the curers.

GRADE STANDARDS AS IN FORCE FOR DEAD PIGS SINCE 1st AUGUST, 1937.

PART I.

Dead Weight Classes	Quality Grades. 1.	2.	3.	U.L.	U.F.
I. Cwt. qr. lb. 1 0 21 to 1 1 13	Maximum back fat $1\frac{3}{16}$ inches.	Maximum back fat $1\frac{7}{16}$ inches.	Maximum back fat $1\frac{9}{16}$ inches.	Under $\frac{3}{4}$″ back fat	Over Grade 3 measurements.
II. Cwt. qr. lb. 1 1 14 to 1 2 3	Maximum shoulder fat 2 inches.	Maximum shoulder fat $2\frac{1}{4}$ inches.	Maximum shoulder fat $2\frac{3}{8}$ inches.		
	Maximum loin fat $1\frac{3}{16}$ inches.	Maximum loin fat $1\frac{7}{16}$ inches.	Maximum loin fat $1\frac{9}{16}$ inches.		

PART II.

Dead Weight Classes.	Quality Grades. (Maximum thickness of back fat at shoulder.) A.	B.	C.	U.L.	U.F.
III. 1 cwt. 2 qr. 4 lb. to 1 cwt. 2 qr. 14 lb.	From $1\frac{1}{4}$″ to $1\frac{7}{8}$″	From 2″ to $2\frac{1}{8}$″	From $2\frac{1}{4}$″ to $2\frac{1}{2}$″	Under	Over
IV. 1 cwt. 2 qr. 15 lb. to 1 cwt. 3 qr. 14 lb.	From $1\frac{3}{8}$″ to 2″	From $2\frac{1}{8}$″ to $2\frac{1}{4}$″	From $2\frac{3}{8}$″ to $2\frac{1}{2}$″	Grade	Grade
V. 1 cwt. 3 qr. 15 lb. to 2 cwt. 0 qr. 0 lb.	From $1\frac{1}{2}$″ to $2\frac{1}{8}$″	From $2\frac{1}{4}$″ to $2\frac{1}{2}$″	From $2\frac{5}{8}$″ to $2\frac{3}{4}$″	A measure-	C measure-
VI. 2 cwt. 0 qr. 1 lb. to 2 cwt. 0 qr. 14 lb.	From $1\frac{5}{8}$″ to $2\frac{1}{8}$″	From $2\frac{1}{4}$″ to $2\frac{5}{8}$″	From $2\frac{3}{4}$″ to $2\frac{7}{8}$″	ments.	ments.

The tables of percentages and prices used in this article were compiled by the Ministry from the summaries of particulars supplied by the Roll and Ham curers in Northern Ireland under the terms of the Agricultural Marketing (Pig Industry) Act (Northern Ireland), 1934.

The first and most important disclosure from the returns of pig carcases graded for the Roll and Ham trade in 1938 was the further marked improvement in the quality of the carcases. On Tables I and Ia will be seen the evidence of the success attained by producers in this direction last year. For example, in Table I the total of the "top" grades, i.e., 1 and A, in 1938 was 40.29 per cent., as against 37.50 per cent. in 1937, the year when the grading standards were altered. This movement into the quality grades 1 and A will be appreciated when it is remembered that the percentages of carcases falling within the first and second quality grades amounted to almost 80 of the total carcases for the Roll and Ham trade last year.

Seasonality of Marketing:

It will be seen from the accompanying Table II. that in the second or spring quarter of the year, comprising the months of April, May and June, the marketings expressed as a percentage of the total for the year have risen, whilst the figure for the winter quarter (October, November and December) has fallen. The figures for each quarter, as shown on the table now approximate more closely to 25 per cent. of the year's total. The tendency for supplies to be distributed more evenly over the year is, perhaps, more noticeable in the monthly percentages shown in the first column of the table, but it should be noted that the appreciable fall in the figures for the winter quarter is accounted for by increases in the number of pigs going into the Wiltshire cure, and the numbers shipped to Great Britain.

Percentages in the Weight Classes:

Table III.—It may be noted that slightly more than half the carcases fall within the weight range c.1.2.15 to c.1.3.14. In the weight ranges below c.1.2.15 there has been a tendency to market a lighter type of pig than was noticeable from the 1937 returns.

Reductions in the numbers of carcases in the weight ranges above c.1.3.15 were also noteworthy features of these statistics, and altogether it seems that there has been a greater concentration towards the production of a handyweight pig.

Table IV.—The average weight of the carcases marketed in 1938 was maintained at the 1937 level of c.1.2.20. As in previous years, the lighter carcases were marketed in the summer months, and the heavier in winter (November and December). The average net value of carcases over the year

was rather higher than in 1937 at £5 10s. 5d. Another feature; there was a fairly steady reduction in the monthly average price up to late summer, since when an upward trend continued until December, when a fall of 4/- resulted from (1) the decline in the cost of the standard ration and the realised prices of bacon and hams and fresh meats; (2) a reduction of 2 lbs. in the weight of the average carcase; and (3) an increase of 1/- in the Pigs Marketing Board levy as from 12th December.

Table V. shows the average weights of carcases falling within the weight and grade classes. The feature of this table is that it shows that, as in former years, the lighter carcases in each weight class inclined towards the higher grades.

Tables VI. to XI. show the details of grading results in the different weight classes. They are all significant in that they show a very definite movement of carcases into the better grades, and so into the higher price levels. The comparison with previous years, especially in those cases where figures are available for 1936 and 1935, shows the distinct improvement in the position.

On Table IX, for example, appears the grading result of carcases weighing between c.1.2.15 and c.1.3.14. This weight range contains over half the total carcases marketed in 1938, and shows clearly the improvement in quality. In Column 1, i.e., Carcases graded A, the percentage has increased from 32.88 per cent. in 1935 to 40.71 per cent. in 1938, and while those graded B remained more or less constant, the third column, Grade C, and the ungraded column show decreases in the four year period.

The same position can readily be seen by a study of the figures in the other five tables, indicating a general improvement in the quality of the carcases marketed in Northern Ireland for the Roll and Ham trade.

Table I.

Grading Results by Months.

Month.	Grades			Ungraded	Total
	1 + A.	2 + B.	3 + C.		
	%	%	%	%	%
January	37.45	39.85	15.04	7.66	100
February ...	39.69	39.14	14.16	7.01	100
March	40.44	38.06	14.17	7.33	100
April	39.38	38.32	15.27	7.03	100
May	37.75	38.76	16.33	7.16	100
June	39.70	37.38	16.06	6.86	100
July	39.45	37.93	15.40	7.22	100
August	41.47	37.35	15.02	6.16	100
September ...	41.06	38.54	14.72	5.68	100
October ...	42.50	37.75	14.39	5.36	100
November ...	41.75	39.49	13.06	5.70	100
December ...	42.58	38.28	12.96	6.18	100
Average for 1938 ...	40.29	38.36	14.77	6.58	100
Average for 1937 ...	37.50	38.07	17.48	6.95	100

Table Ia.

Grading Results by Weight Classes.

Weight Class.	Grade 1.	Grade 2.	Grade 3.	UL/UF		U.	Total
	%	%	%	%		%	%
c.1.0.21 to c.1.1.13	54.17	30.23	10.24	4.98		.38	100
c.1.1.14 to c.1.2. 3	34.28	38.78	18.02	8.72		.20	100
	A.	B.	C.	UL	UF		
c.1.2. 4 to c.1.2.14	48.97	36.06	12.38	.10	1.66	.83	100
c.1.2.15 to c.1.3.14	40.71	39.25	15.85	.04	3.46	.69	100
c.1.3.15 to c.2.0.0	36.24	46.29	13.74	.04	2.85	.84	100
c.2.0.1 to c.2.0.14	27.59	52.94	14.17	.10	3.58	1.62	100
Average for all weights	40.29	38.36	14.77	6.58			100

Table II.

Seasonality of Marketing.

Month.	1938		1937		1936		1935		1930—1934	
	%		%		%		%		%	
January	7.60		6.8		8.1		8.1		8.0	
February ...	7.37	23.75	6.8	21.5	6.9	22.6	6.8	21.0	6.5	21.5
March	8.78		7.9		7.6		6.1		7.0	
April	8.00		8.7		8.0		7.5		7.4	
May	8.99	26.13	7.7	23.0	8.0	24.3	8.4	24.4	7.3	22.6
June	9.14		6.6		8.3		8.5		7.9	
July	7.33		8.6		7.5		6.7		6.5	
August	8.23	24.97	9.1	27.9	7.0	23.7	8.6	25.0	9.5	26.0
September ...	9.41		10.2		9.2		9.7		10.0	
October ...	10.08		10.6		10.9		12.2		11.1	
November ...	7.78	25.15	8.8	27.6	9.8	29.4	9.1	29.6	11.2	29.9
December ...	7.29		8.2		8.7		8.3		7.6	
Total	100		100		100		100		100	
Total number of pigs accounted for	458,000		459,000		527,000		439,000		——	

Table III.

Table showing the percentages of carcases falling within the weight classes indicated in each month.

Month	Under c.1.0.21	c.1.0.21 to c.1.1.13	c.1.1.14 to c.1.2.3	c.1.2.4 to c.1.2.14	c.1.2.15 to c.1.3.14	c.1.3.14 to c.2.0.0	c.2.0.1 to c.2.0.14	Over c.2.0.14	Total
	%	%	%	%	%	%	%	%	%
January ...	1.39	4.56	12.53	16.01	49.11	11.72	3.46	1.22	100
February ...	1.61	5.30	14.51	18.03	48.49	8.81	2.38	.87	100
March ...	1.96	5.62	15.18	18.11	48.96	7.91	1.69	.57	100
April ...	1.48	5.00	15.02	18.09	49.98	8.10	1.83	.50	100
May	1.69	5.48	15.02	17.64	49.82	8.24	1.69	.42	100
June	1.47	5.52	15.84	18.37	49.45	7.55	1.45	.35	100
July	1.70	5.87	16.11	19.29	47.70	7.34	1.56	.43	100
August ...	1.38	5.01	16.44	19.71	48.83	6.98	1.28	.37	100
September ...	1.23	4.13	13.80	18.49	51.77	8.53	1.65	.40	100
October ...	.91	3.23	11.67	16.46	54.10	10.63	2.37	.63	100
November ...	.75	2.61	9.01	13.52	54.35	14.36	4.12	1.28	100
December ...	1.21	3.71	11.78	14.95	49.44	13.15	4.22	1.54	100
Average for 1938	1.39	4.66	13.92	17.43	50.27	9.38	2.26	.69	100
Average for 1937	1.55	4.56	11.88	19.31	49.34	9.76	2.70	.90	100
Average for 1936	9.6		38.1		43.30	6.80	1.60	.60	100
Average for 1935	9.4		39.4		41.70	6.80	1.80	.90	100

TABLE IV.

Month.	Average weight of carcase.								Average value of carcases (less levies paid to Pigs Marketing Board.)			
	1935	1936	1937	1938	1935	1936	1937	1938
	c. qr. lb.	c. qr. lb.	c. qr. lb.	c. qr. lb.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
January	1 2 15	1 2 16	1 2 23	1 2 22	4 15 5	4 10 0	5 9 11	5 12 8
February	1 2 16	1 2 15	1 2 22	1 2 21	4 17 2	4 9 3	5 7 1	5 11 3
March	1 2 13	1 2 13	1 2 15	1 2 17	4 17 7	4 8 5	5 7 10	5 10 10
April	1 2 12	1 2 12	1 2 17	1 2 19	4 15 0	4 9 0	5 6 8	5 12 2
May	1 2 13	1 2 12	1 2 19	1 2 18	4 12 6	4 7 9	5 12 0	5 11 5
June	1 2 9	1 2 12	1 2 23	1 2 18	4 11 6	4 9 7	5 14 4	5 10 10
July	1 2 13	1 2 13	1 2 20	1 2 16	4 13 0	4 10 6	5 10 8	5 9 0
August	1 2 14	1 2 13	1 2 17	1 2 17	4 11 2	4 9 7	5 5 8	5 7 9
September	1 2 15	1 2 15	1 2 18	1 2 19	4 9 4	4 11 0	5 6 10	5 9 3
October	1 2 17	1 2 17	1 2 22	1 2 22	4 9 0	4 16 1	5 9 10	5 10 8
November	1 2 19	1 2 20	1 2 24	1 2 26	4 9 1	5 1 0	5 13 3	5 11 6
December	1 2 17	1 2 17	1 2 24	1 2 24	4 6 7	4 18 8	5 14 7	5 7 6
Average for year	1 2 15	1 2 15	1 2 20	1 2 20	4 11 10	4 12 2	5 9 9	5 10 5

TABLE V.—Average weights within the Weight and Grade classes indicated in 1938.

Month.	c.1.2.4 to c.1.2.14			c.1.2.15 to c.1.3.14			c.1.3.15 to c.2.0.0			c.2.0.1 to c.2.0.14		
	A	B	C	A	B	C	A	B	C	A	B	C
	c. qr. lb.	c. qr. lb.	c. qr. lb.	c. qr. lb.	c. qr. lb.	c. qr. lb.	c. qr. lb.	c. qr. lb.	c. qr. lb.	c. qr. lb.	c. qr. lb.	c. qr. lb.
January ...	1 2 9	1 2 9	1 2 10	1 2 26	1 3 2	1 3 2	1 3 20	1 3 21	1 3 20	2 0 5	2 0 6	2 0 6
February ...	1 2 9	1 2 9	1 2 9	1 2 26	1 2 26	1 3 1	1 3 20	1 3 20	1 3 20	2 0 6	2 0 6	2 0 6
March ...	1 2 9	1 2 10	1 2 10	1 2 26	1 3 0	1 3 1	1 3 20	1 3 20	1 3 20	2 0 6	2 0 6	2 0 7
April ...	1 2 9	1 2 9	1 2 9	1 2 26	1 2 27	1 3 1	1 3 19	1 3 20	1 3 21	2 0 5	2 0 6	2 0 6
May	1 2 9	1 2 10	1 2 10	1 2 26	1 3 0	1 3 2	1 3 20	1 3 20	1 3 21	2 0 5	2 0 6	2 0 6
June ...	1 2 9	1 2 9	1 2 10	1 2 26	1 3 0	1 3 1	1 3 20	1 3 20	1 3 21	2 0 5	2 0 6	2 0 7
July	1 2 9	1 2 9	1 2 10	1 2 26	1 3 0	1 3 1	1 3 19	1 3 19	1 3 20	2 0 6	2 0 5	2 0 6
August ...	1 2 9	1 2 10	1 2 10	1 2 25	1 2 27	1 3 1	1 3 19	1 3 19	1 3 21	2 0 5	2 0 4	2 0 6
September ...	1 2 9	1 2 10	1 2 10	1 2 26	1 3 0	1 3 0	1 3 19	1 3 21	1 3 20	2 0 6	2 0 7	2 0 6
October ...	1 2 9	1 2 10	1 2 10	1 2 26	1 3 0	1 3 3	1 3 20	1 3 20	1 3 21	2 0 5	2 0 6	2 0 7
November ...	1 2 10	1 2 9	1 2 11	1 2 27	1 3 1	1 3 3	1 3 20	1 3 20	1 3 21	2 0 5	2 0 6	2 0 6
December ...	1 2 9	1 2 9	1 2 9	1 2 27	1 3 1	1 3 2	1 3 20	1 3 20	1 3 20	2 0 5	2 0 6	2 0 7
Average for 1938	1 2 9	1 2 9	1 2 10	1 2 26	1 3 0	1 3 2	1 3 20	1 3 20	1 3 21	2 0 5	2 0 6	2 0 6
Average for 1937	1 2 9	1 2 9	1 2 9	1 2 26	1 3 0	1 3 2	1 3 20	1 3 20	1 3 21	2 0 6	2 0 6	2 0 6
Average for 1936	*			1 2 25	1 2 27	1 3 0½	1 3 20	1 3 20½	1 3 21	2 0 6	2 0 6¼	2 0 6¾
Average for 1935	*			1 2 25	1 2 27	1 3 0¼	1 3 20	1 3 20	1 3 20¾	2 0 6	2 0 6	2 0 7

* No comparative weight class in 1935 and 1936.

TABLE VI.

Weight Class—c.1.0.21 to c.1.1.13. (4.66% of total carcases marketed).

Month.	Grade 1.	Grade 2.	Grade 3.	UL/UF	U.	Total
	%	%	%	%	%	%
January	49.43	33.63	10.58	5.92	.44	100
February	53.83	30.89	9.96	4.93	.39	100
March	50.03	32.85	9.69	6.99	.44	100
April	51.20	31.53	11.04	6.01	.22	100
May	51.62	31.72	10.88	5.51	.27	100
June	54.05	28.95	12.50	4.24	.26	100
July	54.31	30.41	10.76	4.42	.10	100
August	58.53	27.60	9.27	4.34	.26	100
September	59.17	27.84	9.22	3.38	.39	100
October	58.01	26.76	9.93	4.76	.54	100
November	55.54	29.39	8.93	5.49	.65	100
December	54.32	31.15	10.09	3.79	.65	100
Average for year 1938 ...	54.17	30.23	10.24	4.98	.38	100
1937 (4.56% of total) ...	47.38	31.45	20.56	.61		100

TABLE VII.

Weight Class—c.1.1.14 to c.1.2.3. (13.92% of total carcases marketed).

Month.	Grade 1.	Grade 2.	Grade 3.	UL/UF	U.	Total
	%	%	%	%	%	%
January	30.79	39.34	19.46	10.16	.25	100
February	31.57	41.71	17.73	8.77	.22	100
March	32.39	40.00	18.12	9.28	.21	100
April	31.05	40.21	18.71	9.87	.16	100
May	31.09	39.29	19.44	10.03	.15	100
June	32.70	38.08	19.11	10.03	.08	100
July	32.79	37.70	19.47	9.87	.17	100
August	36.73	38.60	17.96	6.48	.23	100
September	36.96	38.73	17.33	6.79	.19	100
October	38.93	35.37	17.10	8.43	.17	100
November	38.77	38.56	15.34	7.14	.19	100
December	37.60	37.73	16.53	7.78	.36	100
Average for year 1938 ...	34.28	38.78	18.02	8.72	.20	100
1937 (11.88% of total) ...	27.96	36.67	35.03	.34		100

TABLE VIII.

Weight Class—c.1.2.4 to c.1.2.14. (17.43% of total carcases marketed).

Month.	Grade A.	Grade B.	Grade C.	U.L.	U.F.	Ungraded	Total
	%	%	%	%	%	%	%
January	45.07	38.36	13.39	.16	1.83	1.19	100
February	49.00	35.93	12.32	.12	1.63	1.00	100
March	49.97	35.61	11.77	.10	1.66	.89	100
April	47.56	36.69	12.91	.06	2.22	.56	100
May	45.24	37.54	14.59	.11	1.99	.63	100
June	46.39	36.53	14.48	.04	1.99	.57	100
July	47.58	36.35	12.90	.08	2.32	.78	100
August	49.85	35.19	12.39	.16	1.52	.89	100
September	49.93	35.71	12.36	.08	1.20	.72	100
October	53.01	34.51	10.54	.05	1.13	.76	100
November	51.59	35.23	10.83	.17	1.25	.93	100
December	52.41	35.13	10.10	.10	1.26	1.00	100
Average for year	48.97	36.06	12.38	.10	1.66	.83	100
1937 (19.31% of total) ...	47.53	36.05	13.57	.05	1.86	.94	100

Table IX.

Weight Class—c.1.2.15 to c.1.3.14. (50.27% of total carcases marketed).

Month.	Grade A.	Grade B.	Grade C.	UL.	UF	Ungraded	Total
	%	%	%	%	%	%	%
January	38.61	40.31	16.35	.04	4.03	.66	100
February	40.47	40.00	15.38	.03	3.33	.79	100
March	41.32	38.93	15.44	.04	3.56	.71	100
April	40.39	38.74	16.26	.03	3.96	.62	100
May	38.19	39.53	17.63	.01	3.94	.70	100
June	40.14	38.26	16.93	.02	4.03	.62	100
July	39.10	39.72	16.39	.06	4.05	.68	100
August	40.61	38.85	16.08	.05	3.50	.91	100
September	40.24	40.00	15.67	.03	3.51	.55	100
October	42.33	38.56	15.76	.02	2.83	.60	100
November	42.87	39.30	14.38	.05	2.73	.67	100
December	44.40	38.82	13.95	.07	2.01	.75	100
Average for 1938	40.71	39.25	15.85	.04	3.46	.69	100
Average for 1937	38.09	39.32	17.65	.03	4.14	.77	100
Average for 1936	33.90	40.38	19.61	.03	5.17	.91	100
Average for 1935	32.88	40.47	19.68	.04	5.05	1.88	100

TABLE X.

Weight Class—c.1.3.15 to c.2.0.0. (9.38% of total carcases marketed).

Month.	Grade A.	Grade B.	Grade C.	U.L.	U.F.	Ungraded	Total
	%	%	%	%	%	%	%
January	35.72	47.24	13.14	.05	2.94	.91	100
February	35.40	48.62	12.31	.07	2.86	.74	100
March	36.98	47.22	12.32	.03	2.67	.78	100
April	35.51	46.44	14.20	.00	3.04	.81	100
May	34.16	47.56	14.56	.06	2.89	.77	100
June	36.52	44.54	14.57	.03	3.55	.79	100
July	36.76	44.52	15.15	.12	2.72	.73	100
August	36.14	44.05	15.10	.04	3.73	.94	100
September	35.70	45.53	14.87	.03	2.89	.98	100
October	36.40	46.29	14.13	.02	2.41	.75	100
November	36.77	48.21	11.50	.06	2.44	1.02	100
December	38.77	45.27	13.04	.02	2.01	.89	100
Average for 1938	36.24	46.29	13.74	.04	2.85	.84	100
Average for 1937 ...	34.40	46.23	14.66	.03	3.71	.97	100
Average for 1936	30.74	47.78	15.88	.02	4.45	1.13	100
Average for 1935	30.08	45.77	17.20	.03	4.61	2.31	100

TABLE XI.

Weight Class—c.2.0.1. to c.2.0.14. (2.26% of total carcases marketed).

Month.	Grade A.	Grade B.	Grade C.	UL	UF	Ungraded	Total
	%	%	%	%	%	%	%
January	27.82	55.23	11.80	.08	3.74	1.33	100
February	28.46	54.06	12.36	—	3.75	1.37	100
March	29.69	52.29	12.41	.15	4.13	1.33	100
April	27.10	51.49	16.02	.15	3.59	1.65	100
May	25.32	52.81	15.25	—	3.89	2.72	100
June	27.30	52.63	14.31	.33	4.28	1.15	100
July	28.95	53.33	13.14	.20	3.24	1.14	100
August	24.74	49.89	19.54	—	3.33	2.50	100
September	25.10	51.34	17.33	.14	3.82	2.24	100
October	27.32	54.83	13.21	.09	3.09	1.46	100
November	30.06	53.23	12.27	—	3.20	1.24	100
December	29.24	54.15	12.42	—	2.84	1.35	100
Average for 1938	27.59	52.94	14.17	.10	3.58	1.62	100
Average for 1937	25.53	52.69	15.64	.06	4.40	1.68	100
Average for 1936	23.90	52.21	15.90	.12	5.05	2.82	100
Average for 1935	21.76	54.04	15.60	.08	4.95	3.57	100

THE AGRICULTURAL DEVELOPMENT BILL.

(1)

NEW PROPOSALS FOR THE OAT AND BARLEY SUBSIDY.

Farmers are already aware that it is proposed to introduce new legislation under which the rate of subsidy on oats and barley will be increased. The rate of assistance will be increased from six times to fourteen times the difference between the standard price of 8/- per cwt. and the average price of oats in the United Kingdom in the seven months, September to March, following the crop year. It is expected that the additional rate of assistance will be made retrospective to crops grown and harvested in 1938, and should this be the case farmers who made application in June, 1938, and who have received payment at the rate of 13/2d. per statute acre for oats and 10/10d. per statute acre for barley, will receive an additional amount of 18/4d. per statute acre in respect of their oat, and 20/8d. per statute acre in respect of their barley crops. This, in effect, means that the total rate of subsidy for 1938 on these two crops will be 31/6d. per statute acre.

Farmers whose applications for 1938 crops were received after the prescribed date, or who did not apply, will, it is expected, be given further opportunity of making application when the new proposals become law. Growers of oats and barley who also grew wheat and who elected for wheat deficiency payments in 1938 will, it is expected, become eligible under the new legislation to receive subsidy on their 1938 crops of oats and barley at the rate of 13/6d. per statute acre. Under the present Act, however, the Ministry has no power to accept any fresh applications in respect of the crops grown and harvested in 1938. If further applications can be accepted under the new proposals the Ministry will notify each farmer concerned, and in the meantime farmers can do nothing to obtain subsidy for that year.

The new proposals do not apply to 1937 crops, and no applications in respect of that year's crops of oats and barley can be accepted.

The forms on which to make application for subsidy on crops of oats and barley grown and harvested in 1939 will not be issued until such time as the new proposals become law.

(2)

GRANTS FOR THE PLOUGHING OF GRASSLAND.

Under the Scheme recently announced by the Ministry of Agriculture and Fisheries, a grant at the rate of £2 per acre will be paid to farmers for the

breaking up of land which has been under grass for a period of not less than seven years. The land must be ploughed up between the 4th May, 1939, and the 31st October, 1939. In order to obtain the grant farmers must make application to:—

The Secretary,
Ministry of Agriculture, N.I.,
Stormont, Belfast.

Forms on which to make application may be obtained from that address.

The grant will be paid provided that not less than two acres of land are ploughed up; that the land is capable of being substantially improved by ploughing, and will, if necessary, be capable of producing arable crops in 1940. When ploughed the land must be either directly re-seeded, left fallow, or sown with a catch crop approved by the Ministry. In 1940 the land may be sown down with any crop which the farmer wishes, and if barley or oats are sown for harvesting in that year (1940) the subsidy will be payable, provided that the conditions are complied with. Wheat or oats sown in the autumn of this year (1939) is permitted, and will qualify for subsidy payments in 1940.

Farmers are reminded that most of the land in Northern Ireland would benefit from an application of lime and phosphates, and their attention is directed to the provisions of the Land Fertility Scheme whereby lime and basic slag may be obtained at reduced rates.

The following notes are intended for the general guidance of farmers who intend ploughing up grass land under the scheme, but they are also advised to consult with the Agricultural Instructor for their county.

Any further information regarding the Scheme may be obtained from the Secretary, Ministry of Agriculture, Stormont, Belfast.

NOTES ON THE UTILIZATION OF PLOUGHED UP GRASSLAND.

The object of this Scheme is to encourage farmers to plough up inferior grassland that has been under grass for at least seven years, that will be likely to benefit by fallowing, or sowing to an approved crop or by direct re-seeding, and that might be expected, if the need were to arise, to produce satisfactory arable crops for harvesting in 1940.

The following notes, based on the experience of ploughing up during the Great War, and on more recent work on the rejuvenation of grassland, may be of assistance to farmers who contemplate ploughing up and re-seeding under this scheme.

Heavy Loams and Clay Soils.

In districts where the soil is heavy the method of improvement which seems likely to offer the greatest prospect of success is that of ploughing up the old turf in summer and sowing down before the end of August. The old turf must be completely buried by a flat furrow, in order to smother the herbage and to facilitate consolidation of the ground. Immediately after ploughing, and before the soil "sets", disc or heavy iron harrows should be used, first along the furrows and then at an angle, or across the furrows, the object being to work up sufficient fine tilth without bringing the old turf to the surface. After discing, the land should be levelled by ordinary light harrows, or spiked chain harrows, or, if dry, with a presser or roller. The seed can then be sown and the ground lightly harrowed to cover the seed, and rolled. A nurse crop is not essential, and in summer sowing it is usually undesirable.

Heavy land ploughed as late as October should generally be allowed to lie through the winter in a well set-up, unbroken furrow, and be sown down under a suitable nurse crop in the spring of 1940. By that time the furrows will have had time to weather and settle down, and the seed can then be broadcast. Adequate harrowing and rolling must, however, be given to secure the requisite "tightness". If ploughed early in September a crop of winter wheat or oats could be appropriately taken.

An alternative method, useful in drier districts, would be to sow a mixture of peas, vetches and oats. A suitable rate of seeding for heavy soil would be

8 stones oats
3 „ vetches
4 „ peas

} per statute acre.

This crop, sown early in spring, may be made into hay or silage. As soon as the ground is clear of crop it may be disc-harrowed and prepared for sowing with a seeds mixture in August. In such circumstances neither further ploughing nor a nurse crop is necessary.

Medium and Light Soils.

Most of the soils in Northern Ireland are medium or light, some of which produce inferior grazing. These soils may, in suitable circumstances, be immediately re-sown to grass, with or without a nurse crop, such as 4 lb. per acre of rape. In regions of moderate or high rainfall immediate re-seeding is one of the best ways of establishing an improved sward.

Where it is not possible to plough medium and light soils until September the land may be allowed to lie in the ploughed furrows over the winter and be sown with barley or oats or other suitable crop in the spring of 1940, as recommended for heavy soils. Alternatively, wheat or winter oats may be sown in autumn, and if a full rotation is not being followed, grass seeds sown

in the spring. On the lighter classes of soils there is a risk of damage by wireworm when a cereal is taken as the first crop after old grass. Thorough disintegration and consolidation of the seed-bed and an extra allowance of seed are the best safeguards against this pest. Commonly, a second cereal crop suffers more damage by wireworm than the first crop.

Essential Points in Cultivation.

Whatever methods of cultivation are adopted other than summer fallowing, it is above all necessary to get the turf well buried. For this kind of work the shorter the herbage the better. If the grass on the field to be ploughed is long and tufty it should be cut and cleared off before ploughing commences. As a rule, the procedure is fairly simple: bury all vegetation by careful ploughing, using a skim coulter, except where the turf is very matted, when a disc coulter will be necessary, turn a flat furrow, consolidate immediately and till on the top by disc harrows; then follow with levelling harrows, presser or Cambridge roller, seeding, harrowing and flat rolling.

With all land ploughed out of grass in summer the efforts of the farmer must be concentrated on getting it sufficiently solid before seeding, and the thicker the turf the more necessary the flat ploughing, the discing and the rolling. In the drier districts, especially, it is important that the seed-bed should be so compacted that there is no break in passing into the subsoil. On the more friable soils it may be desirable to roll before discing. With stiffer soils the disc may fail to "bite" if the surface has dried and been made too tight by prior rolling.

Seeds Mixtures.

An improvement in the quality of the pasture will only be obtained if a suitable seeds mixture is used when the ground is sown out, and it is essential that only the best quality of seeds be used. The best seeds mixture for any particular district will depend on a number of factors, such as type of soil, state of drainage and fertility, climate, etc., and if any difficulty is experienced, the Agricultural Instructor for the district should be consulted.

The following seeds mixture is recommended for average soil conditions in Northern Ireland:—

12 to 15 lb.	Perennial Ryegrass
5 ,, 7 ,,	Italian Ryegrass
8 ,, 10 ,,	Cocksfoot
4 ,, 5 ,,	Timothy
1 ,,	Rough Stalked meadow grass
1 ,,	Alsike **or** 1 lb. late Flowering Red Clover
1 ,,	Wild White Clover

For further details with regard to seeds mixtures see Leaflet No. 40, copies of which can be obtained, free from the Secretary, Ministry of Agriculture, Stormont, Belfast.

Manures.

Poor grassland in this country is almost always short of phosphates, and in many cases there is also a marked shortage of lime. On such poor grassland it is advisable to apply a dressing of dung before ploughing. Phosphates should, without fail, be applied to the first cereal crop, and, when the land is sown down in grass, lime, at the rate of 1 to 2 tons per acre, should be applied on the surface immediately before sowing the nurse crop. A return to the plough affords the best means of restoring these essential requirements. Both phosphates and lime act best when worked into the seed-bed, or otherwise thoroughly incorporated in the soil. On the lighter classes of soil potash also will be needed, and almost everywhere a light dressing of nitrogen will have a marked effect in promoting the early establishment of a luxuriant sward. If preferred, this may be applied to the braird. Dressings of nitrogenous manure to land lacking in phosphates, potash, and lime will, however, do more harm than good. Further particulars regarding the manuring and management of grassland are given in leaflet No. 90, "The Improvement of Grassland".

Farmers who intend to manure and lime their land are reminded of the facilities under the Land Fertility Scheme for assistance in the provision of lime and basic slag.

Technical Advice.

The success of the scheme will naturally depend greatly on skilful husbandry and management, and on judgment in the choice of land for breaking up. Facilities for technical advice are available through the County Agricultural Organiser, Instructor, or Overseer. Farmers are strongly advised to consult the local Advisory Officer as to the suitability of their land for ploughing up, the most suitable cultivations, proper dressings of lime and fertilisers, and appropriate seed mixtures for attaining the end in view.

Grassland Unsuitable for Breaking.

The Scheme is intended to effect a permanent and substantial improvement in the fertility of grassland of potential value for arable cropping: it is not intended to encourage the breaking up of very heavy or water-logged grassland carrying poor grass. Cold, wet soils are usually very deficient in phosphates, and need not only drainage but expensive tillage and liberal manuring. Land of this description ought not to be broken up until the surface has been enriched by white clover and other plants of that family, which usually develop after generous dressings of phosphates have been applied. Neither should grassland on very light sandy soils, save in exceptional circumstances, come under the plough. Such soils are easy to till, but they require large quantities of animal or other organic manure, as well as artificial fertilisers, and cannot, as a rule, be made to grow the ordinary farm crops economically.

At the other end of the scale are the rich pastures. Under present conditions, land already carrying first class grass should not be broken up. Such grass, particularly on stiff land, has a special value; not only are its feeding properties high, but it withstands dry weather when other pastures become bare, and it is especially useful for out-wintering stock.

It is important to remember that there is no restriction as to when land ploughed up under the Scheme should be laid down to grass. Farmers may, if they desire, put such land through a complete rotation of crops before reseeding, and such land in the cereal crops will be eligible for the barley, oat, and wheat subsidies in respect of crops to be harvested in 1940.

Farmers who next spring take a crop of oats off their ploughed up grassland would be well advised to put a crop of barley down instead of oats on the land they would be normally seeding to grass, but in all such cases a dressing of lime at the rate of 1 to 2 tons per acre is imperative. A substantial increase in the barley area is the best protection in the event of a national emergency.

(3)

DEFICIENCY PAYMENTS FOR FAT SHEEP AND LAMBS.

In answer to questions in the House of Commons, on 18th May, the Minister of Agriculture and Fisheries made the following statement regarding the new scheme for sheep:—

"Sheep form an essential feature of the agricultural economy of a large part of the country, and past experience suggests the desirability of safeguarding the industry against serious losses such as occurred in 1938. The Government accordingly propose to invite the Livestock Commission to prepare a scheme of price insurance which would provide a deficiency payment from the Exchequer on sheep (excluding ewes and rams) which are presented for sale for slaughter, and exceed a prescribed qualifying minimum weight. It is proposed that these deficiency payments should be made in respect of standard weights; that is to say, a given amount per head would be paid in respect of all sheep of the same class eligible for subsidy, irrespective of their actual weights. There would, however, be two different classes of sheep with different qualifying and standard weights, consisting of a lighter class and a heavier class.

It is proposed that the monthly standard prices for sheep should follow the normal seasonal variations, and should be such as will average 10d. per lb. over the year, and that this figure should be related to a total United Kingdom sheep population of 27,000,000, subject to provision being made for varying the standard price in the event of the sheep population rising above this figure, or of the standard price being in excess of the market price for two years in succession. To give effect to this provision it is proposed that:—

(1) The standard price should be "stepped down" by $\frac{1}{8}$d. in relation to successive increases of 250,000 in the total United Kingdom sheep population, above 27,000,000 up to a figure of 28,000,000, and by $\frac{1}{4}$d. for each successive 250,000 thereafter; and

(2) If the standard price should be for two successive years in excess of the market price, the standard price of 10d. as related to the basic sheep population of 27,000,000 would be scaled down, subject to which all relevant factors, including imports would be considered."

Later the minister affirmed that, in view of the fact that a portion of the money that is raised on beef subsidies, and for the assistance of the beef industry, is used to improve the quality of beef, the same thing will be done for mutton. That is, an attempt will be made to use the money for the purpose of improving the quality of mutton.

NOTE REGARDING SHEEP MARKING.

In view of these proposals for the application of price insurance to fat sheep, the Ministry desires to indicate the position that may arise with regard to the marking of sheep that may become eligible for deficiency payments.

Farmers are requested to note that, while it is not possible to give any authoritative decisions on this question until the proposals have received statutory sanction, and a detailed scheme has been approved, there is every likelihood that sheep certified for deficiency payments will be marked in the right ear. If sheep presented for certification are already marked in the right ear by means of snips, holes or cuts, confusion will arise and there may be difficulty in accepting them as eligible for deficiency payments. Sheep farmers who are in the habit of marking their lambs at this time of year are, therefore, advised to leave the right ear free from such marking.

MARKETING SCHEMES.

AGRICULTURAL MARKETING (PIG INDUSTRY) ACT (N.I.) 1934.

PIG PRICES FOR JUNE.

The following announcement has been made by the Pig Industry Council for Northern Ireland.

Prices for Dead Pigs.

The prices per dead cwt. for dead pigs sold by producers to curers in Northern Ireland in June, 1939, are as follows :—

Weight Class. (Dead Weight)	Grade 1.	Grade 2.	Grade 3.	U.L. or U.F.	Partly Black Pigs
c.1.0.21 to c.1.1.13	62/10	59/10	56/10	52/10	
c.1.1.14 to c.1.2. 3	66/10	63/10	60/10	56/10	5/- below relevant Grade Price
Weight Class. (Dead Weight)	Grade A.	Grade B.	Grade C.	U.L. or U.F.	
c.1.2. 4 to c.1.2.14	66/10	63/10	60/10	57/10	
c.1.2.15 to c.1.3.14	66/10	63/10	60/10	57/10	
c.1.3.15 to c.2.0. 0	63/10	60/10	57/10	54/10	
c.2.0. 1 to c.2.0.14	57/10	54/10	51/10	48/10	

Pig Carcases c.1.0.0 to c.1.0.20—59/10

(*N.B. These prices represent a decrease of 7d. per cwt. on the month*).

Authorised cuts :—

(a) Broken ham (dry, shank and/or shell bone break)—5% of the gross value of the carcase.

(b) Broken ham (wet break)—12½% of the gross value of the carcase.

(c) Shoulder-stuck carcase—3/- per shoulder affected.

The gross value of a carcase is the product of the dead weight and the relevant grade or other price per cwt.

Where portion of a pig carcase is condemned on account of disease the existence of which could not reasonably have been known to the producer before despatch to the curer, the appropriate grade price (or fixed price if the carcase weighs not less than 1 cwt. 0 qr. 0 lb. and not more than 1 cwt. 0 qr. 20 lb.) shall apply. If the carcase it wholly condemned on account of disease

the existence of which could not reasonably have been known to the producer before despatch to the curer the relevant Grade 2 or Grade B price (or fixed price if the carcase weighs not less than 1 cwt. 0 qr. 0 lb. and not more than 1 cwt. 0 qr. 20 lb.) shall apply.

The foregoing prices do not apply in the case of (a) wholly black pigs, boars, rigs or stags, sucked sows, and pig carcases weighing under c.1.0.0 or over c.2.0.14 and (b) pigs visibly diagnosable as diseased before despatch by the producer and subsequently condemned; emaciated or screw pigs; smelling pig carcases with definite indications of putrefaction and pig carcases badly abused or damaged before being handed over by the producer to the curer.

Prices for Pigs Sold Alive on Direct Contract to Wiltshire Curers in Northern Ireland, and for Pigs Sold Alive to the Pigs Marketing Board (Northern Ireland) and Resold to Wiltshire Curers in Northern Ireland.

In the case of pigs sold alive to Wiltshire curers under direct contract or sold to the Pigs Marketing Board and resold to Wiltshire Curers, the prices per dead cwt. during June, 1939, are as follows:—

Weight Class. (Dead Weight)	Grade 1.	Grade 2.	Grade 3.	U.L. or U.F.	Unsuitable
c.1.0.21 to c.1.1.13	71/10	68/10	65/10	61/10	58/10
c.1.1.14 to c.1.2. 3	71/10	68/10	65/10	61/10	58/10
	Grade A.	Grade B.	Grade C.	U.L. or U.F.	
c.1.2. 4 to c.1.2. 7	68/10	65/10	62/10	59/10	
c.1.0. 0 to c.1.0.20	Suitable 60/10		Unsuitable 58/10		
Over c.1.2.7	On the same basis as pigs sold dead.				

(*N.B. These prices represent a decrease of 7d. per cwt. on the month*).

Prices for Pigs Sold Alive to the Pigs Marketing Board (Northern Ireland) and Not Resold to Wiltshire Curers in Northern Ireland.

In the case of pigs sold alive to the Pigs Marketing Board during June, 1939, and not resold to Wiltshire curers, the prices per live cwt. according to grade are as follows:—

Live Weight.	Grade 1.	Grade 2.	Grade 3.		Unsuitable
c.1.1.14 to c.1.2.13	45/9	45/9	45/9	U.L. or U.F. 46/6	44/3
c.1.2.14 to c.2.0. 0	54/–	51/9	49/6		44/3
c.2.0. 1 to c.2.1.14	47/3	45/–	42/9		40/6
c.2.1.15 to c.2.2. 7	45/–	42/9	40/6		38/3
c.2.2. 8 to c.2.2.21	40/6	38/3	36/–		33/9

(*N.B. These prices represent a decrease of 7d. per cwt. on the month*).

These prices do not apply to live pigs under c.1.1.14 or over c.2.2.21, live pigs intended for breeding, live boars, live sucked sows, rigs or stags, injured or diseased pigs, live in-pig gilts, or live pigs sold (on contract, registered with the Pig Industry Council) to curers in Northern Ireland. All other live pigs inside the weights c.1.2.0 to c.2.2.21 can be sold only to the Board.

Authorised Deductions.

Every pig (dead or alive) sold to a curer or to the Pigs Marketing Board is subject to a levy at present amounting to 4/2d.

In addition to this amount, a deduction of 4d. per pig may be made in the case of sales to curers of dead pigs and of live pigs on Direct Contracts in operation prior to 1st May, 1939, or to the Board (on pigs resold to curers in Northern Ireland) ; a deduction of 7d. per pig may be made in the case of sales on Direct Contracts commencing to operate on or after 1st May, 1939. These deductions are to cover insurance in the event of a carcase being condemned as unfit for human consumption.

GRADING STATISTICS.

(I) Dead Pigs.

Table showing the percentages of pig carcases purchased for the Roll and Ham cure within the weight and grade classes indicated during March, 1939.

Under c.1.0.21		c.1.0.21 to c.1.1.13					c.1.1.14 to c.1.2.3					
Suitable	Un-suitable	Grade 1	Grade 2	Grade 3	U.L. & U.F.	U.	Grade 1	Grade 2	Grade 3	U.L. & U.F.	U.	Totals
1.54	.26	2.86	1.60	.32	.24	.02	5.32	6.31	2.11	1.01	.04	21.63

Grade A.			Grade B.					Grade C.				
1	2	3	4	1	2	3	4	1	2	3	4	
8.69	20.52	2.76	.40	6.66	21.25	4.01	.91	1.81	7.18	.92	.20	75.31

Ungraded Carcases.

Under Grade A measurements. U.L.	Over Grade C measurements U.F.	Wholly condemned U.1.	Wholly black, injured or damaged U.2.	Overweights, boars, sows, etc. X.	Partly Black Y.	
.05	1.95	.02	.45	.58	.01	3.06
					TOTAL	100%

These figures have been calculated from the purchase and grading statements which the curers furnish to the Ministry.

The volume of trade in pig carcases for the Roll and Ham trade during March was considerably larger than a month earlier. The fixed price was the same for both months, and with the average weight of the carcases unchanged at c.1.2.19, average realised prices showed very little change. The price per cwt for March was £3 10s. 9d. and the price per head £5 2s. 8d.

(II) Live Pigs.

The following table gives the percentage results of an analysis of the purchase and grading statements furnished by Wiltshire Bacon Curers in respect of live pigs delivered on direct contract by producers during the month of April, 1939.

Weight Class.	Grade 1.	Grade 2.	Grade 3.	Unsuitable U.L. or U.F.	Total
Under c.1.0.0					.09
c.1.0.0 to c.1.0.20					.99
c.1.0.21 to c.1.2.3	52.78	28.58	6.39	2.52	90.27
	Grade A.	Grade B.	Grade C.		
c.1.2.4 to c.1.2.7	2.33	1.80	.41	.08	4.62
c.1.2.8 to c.1.3.14	1.66	1.61	.66	.09	4.02
Over c.1.3.14					.01
				Total	100%

The average net price per cwt. in respect of these deliveries works out at £3 7s. 1d., after making allowance for insurance and contribution to the Pigs Marketing Board.

The average weight works out at c.1.1.20, the net average price per pig being £4 15s. 11½d.

COST OF STANDARD PIG RATION.

The average retail cash price per cwt. of the standard ration for the sixteen weeks' period ended 20th May, 1939, was 8/7¾d. The average price for the similar period ended 22nd April, was 8/8¾d. These figures have been calculated by the Ministry from returns collected from ten representative centres in Northern Ireland.

The following is the ration upon which the feeding cost is based :—

Maize Meal	30%
Barley Meal	30%
White Pollards	20%
White Bran	10%
Meat Meal (60% Protein) ...	10%

MARKETING OF EGGS ACTS (N.I.) 1924—1937.

NORTHERN IRELAND EGG PRICES.

The following table shows the prices fixed by the Ministry and payable by licensed wholesale dealers for eggs purchased from producers during the weeks specified, as compared with the prices fixed for the corresponding weeks of 1938.

Week ended	1939				1938			
	Hen Eggs per lb.*		Duck Eggs per doz.*		Hen Eggs per lb.		Duck Eggs per doz.	
	s.	d.	s.	d.	s.	d.	s.	d.
May 6	0	6½	0	9	0	7	0	10
„ 13	0	6½	0	8	0	7	0	10
„ 20	0	5½	0	8½	0	7¼	0	11
„ 27	0	5¾	0	8	0	6¾	0	10½
June 3	0	6¾	0	8	0	7	0	10

* When hen eggs are delivered by the producer to the packing store of a licensed Wholesale Dealer of Class A an additional ½d. per lb. is payable; in the case of duck eggs an additional ¾d. is payable for each complete dozen so delivered.

Payment on a quality basis came into operation during the week ended 5th March, 1938.

The following were the standard deductions :—

Hen eggs : "Seconds" and soiled eggs, ½d. per egg.

Rejects : ¾d. per egg during May, and 1d. per egg during the week ended 3rd June.

Duck eggs : Rejects, ¾d. per egg.

LONDON EGG PRICES.

Return of average prices of eggs at London on Monday each week, furnished by the London Egg Exchange, and published in the Weekly Dairy Produce Notes of the Imperial Economic Committee :—

Hen Eggs, per 120.

Description.	1/5/39	8/5/39	15/5/39	22/5/39	30/5/39
English National Mark :—					
(Specials)	12/3	12/3	12/9	12/6	12/3
(Standards	10/9	10/9	11/3	10/9	10/9
(Mediums)	10/–	10/–	10/6	10/–	9/6
(Pullets)	8/9	8/9	9/3	8/9	8/3
Northern Ireland :—					
(Extra Specials)	11/9 12/–	12/– 12/6	12/3 12/6	12/– 12/3	12/–
(Specials)	11/– 11/3	11/3 11/9	11/3 11/6	10/9 11/–	10/6 10/9
(Standards)	10/– 10/6	10/6 10/9	10/3 10/6	10/– 10/3	10/– 10/3
(Selected)	9/9 10/–	9/9 10/3	9/9 10/–	9/3 9/6	9/–

THE CATTLE INDUSTRY (EMERGENCY PROVISIONS) ACTS, 1934 AND 1935 AND THE LIVESTOCK INDUSTRY ACT, 1937.

SUMMARY OF PAYMENTS.

The following is a summary made under these Acts up to and including 27th May, 1939 :—

Live Weight.	No. of Animals.	Total Amount Paid.
		£ s. d.
England and Wales	5,183,955	12,900,611 19 3
Scotland	1,593,033	4,220,369 10 0
Northern Ireland	537,967	1,154,846 9 6
TOTAL (United Kingdom)	7,314,955	18,275,827 18 9
Dead Weight.		
England and Wales	158,158	398,228 17 1
Scotland	48,347	142,588 12 7
TOTAL (Great Britain)	206,505	540,817 9 8

NUMBERS CERTIFIED FOR SUBSIDY.

The numbers of fat cattle certified for payment of subsidy in April, 1939, have been as follows :—

	April, 1939					Corresponding totals in	
	Home-bred		Imported		Total	April, 1938	April, 1937
	Ordinary Grade	Quality Grade	Ordinary Grade	Quality Grade			
England ...	21,141	39,042	4,827	16,212	81,222	78,402	92,479
Wales ...	2,040	1,907	21	36	4,004	3,885	4,484
Scotland ...	2,040	16,456	963	12,020	31,479	31,359	32,853
Northern Ireland	5,324	2,386	371	189	8,270	8,499	9,374
United Kingdom	30,545	59,791	6,182	28,457	124,975	122,145	139,190

As the great majority of fat stock markets are held on the early days of the week the rate of marketing of fat cattle cannot be judged accurately from the number of animals marketed in a calendar month. For comparative purposes appropriate weights are applied by the Livestock Commission to each day of the week, and the figures for each calendar month are adjusted accordingly, so as to allow as far as possible for the fact that a large number of markets are held on Mondays, and that the number of markets held decreases day by day as the week proceeds. The adjusted figures for April, 1939, 1938 and 1937, are 133,793, 128,171 and 144,547 respectively.

AVERAGE PRICES OF CERTIFIED CATTLE.

The average prices per live cwt. of certified cattle in April, 1939, have been:

	April, 1939.			Corresponding averages in	
	Ordinary Grade	Quality Grade	Average	April, 1938	April, 1937
	s. d.	s. d.	s. d.	s. d.	s. d.
England	38 4	41 5	40 6	43 8	—
Wales	39 2	42 10	41 0	44 8	—
England and Wales ...	38 5	41 6	40 7	43 8	39 6
Scotland	37 11	41 3	40 11	45 3	40 9
Northern Ireland	*	*	38 5	40 7	36 9
United Kingdom	†38 4	†41 5	40 6	43 11	39 7

* Method of calculation under review.
† Excluding Northern Ireland.

WHEAT ACT, 1932.

ADVANCE PAYMENT OF £1,223,350 TO REGISTERED GROWERS.

The Wheat Commission has despatched cheques to 24,002 registered growers on the 18th May in payment of an advance on account of deficiency payments payable under the Wheat Act for the cereal year ending 31st July, 1939. In 316 other cases where it had not been practicable to make payment on the 18th May, it has been arranged to despatch cheques as soon as possible after that date.

The payment will be at the rate of 4/- per cwt. (18/- per qr. of 504 lbs.) in respect of 6,116,750 cwts. (1,359,300 qrs.) of wheat vouched for by 32,486 wheat certificates delivered to the Commission between the 1st March and 29th April, 1939.

The aggregate amount of this advance is approximately £1,223,350, bringing the total sum advanced on account of deficiency payments for the current cereal year to approximately £6,143,600. This sum covers 170,437 wheat certificates vouching for a total quantity of 30,718,000 cwts. (6,826,200 qrs.) of wheat.

The Commission hope to make an advance payment later in the cereal year to growers who delivered wheat certificates after the 29th April.

AGRICULTURAL NOTES.

EXPERIMENT ON USE OF POTATOES IN BEEF PRODUCTION.

Since the Great War the number of seasons in which potato growers have had difficulty in marketing the crop has been many. Several years it has been nearly, if not entirely, impossible to sell the potatoes direct and therefore it has been necessary to use them on the farms for stock feeding. "How far can surplus or unmarketable potatoes be used to reduce the expenditure of purchased concentrates?" is a question which is often asked. Undoubtedly, for pigs, a certain proportion of the meal mixture may be replaced by boiled potatoes but at most the degree of substitution in the case of this class of stock is small, and there is also the consideration that potatoes for pig feeding must be boiled: further, extensive potato growing and pig fattening on a large scale are not often carried out on the same farm. On the other hand, winter beef production and tillage, which includes growing large areas of potatoes, usually go hand in hand; and potatoes may be fed raw to cattle.

Last winter (1938/39) an experiment was designed to see how far the expenditure on meals for fattening bullocks could be reduced by the use of potatoes and to what limits could potatoes be safely fed. The experiment was carried out at the North West School, Strabane, under the supervision of Mr. W. J. McKee, Farm Manager. Visitors to the Ministry's Educational Exhibit at the recent Balmoral Show had an opportunity to see animals from this experiment.

Non-pedigree Shorthorn bullocks, about six-quarters old, and weighing around 7½ cwt. each, were divided as evenly as possible into two groups and were put into loose sheds in January for fattening. The meal mixture used for both lots was similar and was made up of 2 parts crushed oats 2 parts maize meal and 1 part decorticated earthnut cake. For the purposes of the experiment it was decided to substitute 4 lb. potatoes for 1 lb. of meal mixture. Both lots started on an allowance of 3½ lb. per head daily of the meal mixture. For Group No. 1 (Meal Group) this allowance was gradually increased until a maximum of 8 lb. daily was reached. For Group No. 2 (Potato Group) the meal allowance was not increased—it remained at 3½ lb. —but for each lb. increase of meal over and above the 3½ lb. given to Group 1, Group 2 had an allowance of 4 lb. pulped raw potatoes. When Group 1 animals were getting 4 lb. meal, those in Group 2 were getting 3½ lb. meal, plus 2 lb. potatoes. Similarly, when the meal allowance to Group 1 was 6 lb., the allowance to Group 2 was 3½ lb. meal and 10 lb. potatoes being the equivalent of 2½ lb. meal. When Group 1 was on its maximum allowance of 8 lb. meal the ration for Group 2 was 3½ lb. meal and 18 lb. potatoes. It will easily be seen that Group 2 ate considerably less meals than Group 1.

One naturally asks here what is the comparative rate of thrive and how did the lots compare on grading? The rate of thrive made by both lots was approximately the same. It differed by an average of only 5 lb. per head over the entire experimental period of four months, and worked out at an average daily gain per head of 1.8 lb. The grading results were exactly similar—one-third of each group being super grade and two-thirds ordinary grade.

The following table gives some of the average results per head:—

	Group 1 (Meals)			Group 2 (Potatoes)		
	c.	q.	lb.	c.	q.	lb.
Starting weight on 20-1-39	7	2	0	7	1	23
Final weight on 20-5-39	9	1	21	9	1	21
Gain ...	1	3	21	1	3	26
Meal consumed	6	3	21	3	2	14
Saving in meal due to use of Potatoes ...				3	1	7
Potatoes consumed				13	0	0

The cattle from both lots were sold by auction in one of the Belfast sale-yards, and those from the Potato Group made a slightly higher price both per head and per cwt. than those from the Meal Group. However, assuming that the average value of both groups is similar and that both lots increased in value during the fattening period by the same amount, an indication of the value of the saving in meals due to the use of potatoes is obtained.

The meal consumption per head by the Potato Group was 3 cwt. 1 qr. 7 lb. less than by the Meal Group. This saving in meal at the buying price of 6/8d. per cwt. is equal to 22/- per head. In other words, the expenditure on purchased meals for fattening bullocks over a four months' period was reduced by 22/- per head due to the use of surplus potatoes; and for the 13 cwt. potatoes consumed per head, this is equivalent to 1/8d. per cwt. for potatoes.

It is not suggested that a return of 1/8d. per cwt. (£1 13s. 4d. per ton) for potatoes is sufficient to pay the cost of production of the crop but the experiment indicates that with meals at their present prices, surplus or unmarketable potatoes when fed to fattening bullocks can effect a saving in meal, equivalent to 1/8d. for each cwt. of potatoes fed.

It should be noted that care must be exercised in the feeding of potatoes. The starting allowance should be not more than 3 or 4 lb. per head per day, increases must be made gradually, and the supplies withheld if the cattle show signs of scouring. Those who conducted this experiment think that even more than 18 lb. potatoes per head per day could be fed to fattening bullocks of from 1½ to 2 years old if sufficient care is taken.

SEASONAL FARM NOTES.

Hay.—To obtain hay of maximum feeding value it is essential that the crop should be mown at the proper stage of growth which is before it is ripe. Hay which has been allowed to produce and ripen seed will be more "woody" and much less nutritious than hay which was mown when in the unripe and palatable stage. The argument that if the crop is cut too soon, there will be a loss of bulk, is unsound. A smaller bulk of hay having a high feeding value is more economical than the larger bulk of lower quality. Therefore, if suitable weather for hay-making prevails at the time the main bulk of the grasses in the crop have flowered, mowing should not be delayed beyond that time.

Excessive exposure of hay to rain and sun causes heavy loss of nutrients, and it is essential that every favourable opportunity should be taken to save the hay as rapidly as possible after it has been cut. The field "ricks" should be carted from the fields as soon as the hay is in a fit condition for stacking. It is a particularly bad practice to leave them too long in the fields, as this results in damage to the hay on the outsides and at the bottoms of the ricks, and also prevents proper use being made of the aftermath for stock-feeding. The following points should be kept in mind in connection with hay harvesting:—

(1) Successful over-wintering of stock and the maintenance of milk yields without excessive outlay on purchased foods depend on an ample supply of good quality hay.

(2) Hay which is cut early, not later than the flowering stage, is palatable and of maximum feeding value. The use of such hay will save much money in the purchase of cakes and meals.

(3) Early cutting means early stacking so that there will not be a rush when the corn harvest is ready; it distributes labour more evenly over the summer and autumn.

(4) The aftermath following early-cut hay is abundant. This provides useful grazing, or a second hay crop can, if desired, be taken.

(5) Hay should be handled carefully and every opportunity of "drying" weather taken to get the hay seasoned and put into "ricks" in which it will be safe for a time.

(6) In showery weather, hay is safer in "laps", small cocks, or even in the swath than when spread out.

(7) Hay ricks should be made as large as the condition of the hay will permit, so as to reduce the proportion of hay exposed to the weather and on the ground.

(8) The ricks should be firmly secured with ropes to prevent them being tossed in stormy weather.

Saving Grass Seed.—Where it is intended to save grass-seed the hay crop will have to be allowed to ripen fully before it is cut. Only good, well-grown and clean crops of hay should be reserved for de-seeding as the financial return from the seed from inferior or weedy crops seldom justifies the extra expense, especially when the reduced feeding value of the hay and of the aftermath is taken into account.

Potatoes.—Special attention should be paid to the moulding of potatoes to ensure sufficient mould being on the drills to prevent the tubers from becoming exposed to the sun and getting sunburnt. A large proportion of sunburnt tubers in ware is a great loss, in that all sunburnt tubers must be picked out when preparing the ware sample for sale.

It should also be remembered that there is considerable risk of poisoning stock if potatoes in which there is a high proportion of sunburnt tubers are fed. It is, therefore, very important to mould the drills efficiently to prevent tubers becoming sunburnt.

Spraying of Potatoes.—The potato crop should be sprayed, not later than the first week in July to protect it against blight disease, and at intervals of three weeks thereafter until the tops are ripe or are destroyed in cases where seed is being produced (See Leaflet No. 87). Burgundy mixture is usually used for spraying potatoes, and this mixture is prepared by dissolving 8 lb. copper sulphate (bluestone) in 35 gallons of water, in a wooden barrel, and adding a washing soda solution prepared by dissolving 10 lb. washing soda in 5 gallons of water. The bluestone solution should be stirred while the washing soda solution is being added. The use of finely ground bluestone and washing soda will facilitate the process of dissolving.

Seed Potatoes.—There is room for considerable expansion in the trade for seed and farmers intending to produce seed potatoes suitable for shipment should pay special attention to the following points:—

(1) Apply immediately to the Ministry or the local Potato Inspector to have the crops inspected with a view to obtaining a certificate with regard to health and purity;

(2) Rogue the crops carefully, removing completely all plants of a different variety, or any unhealthy plants;

(3) Spray early against blight disease;

(4) Destroy the tops before ripening has taken place;

(5) Read Leaflet No. 87—"The Production of Potatoes for Seed".

Weeds.—A good opportunity for destroying weeds is offered when the ground is occupied by a root crop and the periodical hoeing and weeding of potatoes, turnips, mangel, cabbage and kale should not be neglected; as previously mentioned, it is important that the potato drills should be well moulded up after each hoeing. The value of land is greatly increased if it is properly cleaned, and it is when the ground is producing a root crop that cleaning can be done most efficiently and cheaply.

In the case of weeds growing in pasture land their destruction should be carried out before flowering has occurred. It is an offence under the Weeds and Seeds Act to permit certain noxious weeds, including thistles, docks, ragwort, and ox-eye daisy, to ripen their seeds, and inspections will be made by the Police to see if the destruction of such weeds has been carried out in good time. Failure to destroy the weeds will likely lead to a prosecution and fine, but it is hoped that all land owners will, as a point in good farming, destroy all noxious weeds in good time, and not because the Act requires them to do so.

Pasture.—As was emphasised in last month's Report, pastures which are understocked, and for that reason have become overgrown, should be top-mown before the end of June. Top-mowing prevents the grasses from "shooting" and becoming hard and woody, and also stimulates further growth of succulent bottom grass which provides forage during the autumn and winter. The top-mowing of pastures in summer is the most important item of management in obtaining grassland of good quality, and an even growth of succulent pasture during late summer.

SEASONAL LIVESTOCK NOTES.

Weaning of Calves.—Where the normal method of rearing calves on separated milk is practised, the animals may be weaned at the age of from 5 to 6 months old. For a few weeks prior to this the calves should get a small handful of a suitable meal mixture to eat from the drinking vessels after they have finished the drink. This practice not only teaches the calves to eat meals, thus improving their condition, but also assists greatly in preventing the calves from sucking each other after drinking time.

When the calves are from 5 to 6 months old the quantity of separated milk should be gradually reduced until milk feeding is discontinued, and the amount of meals increased. A suitable meal ration for a calf after the milk has been entirely withdrawn is a mixture of 2 lb. crushed oats and 1 lb. linseed cake per day. Linseed should not be steeped, as it may then be poisonous, but either fed in the raw, dry state, or after cooking in boiling water. (See Leaflet No. 19). It is important that the calves should have free access to a supply of clean water.

Sheep Dipping.—The dipping period extends from the 15th June to 15th August, and all sheep must be dipped twice within that period with an interval of not less than 7 or more than 14 days between the two dippings.

Sheep should not be dipped when very full or when overheated. It is advisable to confine the sheep in a clean open shed, pen, or yard, and to allow them to rest for a period before dipping is commenced. This is especially necessary if they have been driven some distance for dipping.

Sheep Maggot Fly.—A careful watch should be kept on the flock for signs of attack by the sheep maggot fly. Sheep which are scouring or have tangles of dirty wool around the hindquarters are very liable to be "struck" and, for that reason, all tangles of loose, dirty wool should be removed. This trimming will prevent droppings adhering to the wool in the vicinity of the tail and reduces the likelihood of maggot attack.

If attacks occur, the maggots should be rubbed out, using a little carbolic dip to assist in dislodging them. Petrol kills the maggots very effectively, but the application of petrol to infested sheep is very severe on the animals and should not be attempted in cases where wounds have been made by the pests.

If the skin is broken, the sores should be dressed with an ointment made up of powdered sulphur mixed with fresh lard or with linseed oil.

Weaning Lambs.—Preparation should be made at this time for the weaning of lambs, and with this end in view, a field of good, short, fresh pasture should be reserved for the lambs. Lambs should be well cared for at this stage to prevent them getting a setback.

After the lambs have been removed from the ewes it may be necessary to milk the ewes a few times to prevent undue distention of the udder with consequent pain to the sheep and, perhaps, inflammation.

Pigs.—Young pigs will benefit greatly from frequent runs over fresh, clean pastures during fine weather. Care should be taken, however, to avoid excessive exposure to the sun as there is some risk of young pigs being adversely affected thereby. A rough shelter into which the pigs may go at will should be provided, if natural shade is not available.

NOTES ON THE DESTRUCTION OF RABBITS.

Not only do rabbits destroy root and cereal crops and grass, but they can also serve to carry and spread infectious diseases such as tuberculosis. It is, therefore, very important that every farmer should destroy the rabbits on his farm.

The ordinary methods of shooting, bait-poisoning and trapping are laborious and are not well suited to the average farmer who has little time to spare. A new method which is efficient and can be carried out reasonably quickly,

and does not cause any unnecessary pain to the rabbits, is that of gas poisoning.

There are several proprietary powders such as Cymag and Cyanogas, which, when allowed to come in contact with damp soil, emit a very poisonous gas which will destroy all rabbits, rats, etc., which inhale the gas.

The important points in this method are to blow the powder well into the burrow and to seal all openings to the burrow except that through which the powder is being introduced, so that the gas will be confined and the rabbits will not be able to escape. Burrows so treated will not be reopened by rabbits for a considerable period.

In order to exterminate rabbits from any district it is necessary for all the farmers in that district to co-operate and treat all the burrows, for if even a few rabbits are left they will soon multiply and again spread over the whole district. Where a number of neighbours are doing the work only one blower need be purchased, thus reducing the cost of the work.

SEASONAL GARDEN AND ORCHARD NOTES.

Apple Trees.—The spraying of apple trees with Bordeaux mixture for the prevention of apple scab disease should be carried out at intervals of from 14 to 21 days until the middle of July. It is very important that the trees should be adequately protected against the disease late in the season, as this reduces the intensity of the disease the following year.

The grass in grass orchards should now be cut and left on the ground to rot down. In no circumstances should the grass be made into hay and removed, neither should it be heaped up around the stems of the trees, as this makes the next cutting more difficult, and the cut grass does not rot readily when placed in heaps.

Plum and Damson Trees.—Silver leaf disease is a common cause of the death of both plum and damson trees. The disease usually attacks only one branch at a time, and if the affected branch is removed early the remainder of the tree may be saved. A careful watch should, therefore, be kept for the first appearance of the disease and the affected branch removed at once. The branch should be cut back sufficiently far to remove all the wood which shows a dark stain.

The removal of diseased branches, and any other pruning necessary, in the case of plum and damson trees should be done during the months of June and July, as, if done then, not only will the wounds heal rapidly, but the spores of the disease cannot enter the wounds as they would if pruning is done at other times.

Gooseberries.—Gooseberry bushes should be examined periodically for gooseberry saw-fly caterpillars. Sometimes a brood of these appears about

the middle of June, and since the fruit is approaching maturity at that time a spray which would leave a poisonous deposit on the berries cannot be used. If the bushes are sprayed with a good contact insecticide, such as nicotine, or a preparation of derris or pyrethrum, when the caterpillars are small the pests will be destroyed. After a few days' interval following the application of such sprays the berries can safely be used. When the first brood of these caterpillars is destroyed as advised, the bushes are seldom attacked by sawfly caterpillars later in the year.

Winter Vegetables.—The planting out of winter vegetables such as late broccoli, savoy cabbage and leeks, as advised last month, should be completed without delay. The ground between growing plants should be frequently hoed to keep weeds down and to promote growth. Celery should be watered when necessary as it is very important that this crop should not suffer from drought. Careful watch should be kept for the appearance of the various insect and fungoid pests which attack the vegetable crops, and prompt measures taken to deal with them. Leaflet No. 89 contains recommendations for the prevention and control of some of the pests and diseases of vegetable crops.

Flowers.—Wallflowers, forget-me-nots and other spring-flowering plants, which were sown last month, should be pricked out into nursery beds as soon as they are fit to handle. If these plants are left long in the seed beds they become crowded and weakly and will not prove so satisfactory for the production of flowers as plants which have been grown as advised above.

General.—The ground between all growing plants should be frequently hoed in order to promote growth and to keep weeds down. Plants requiring support should be provided with it before they actually need it. This is particularly so in the case of the edible pea and runner beans. These should always be staked when they are quite small.

Lettuce.—A further sowing of lettuce should be made and later the young plants should be thinned out. Do not transplant the thinnings, as these are more likely to produce flowers than to form heads.

Fruit.—Supplies of packages in which to market fruits should be obtained in good time. It is sometimes difficult to procure these when the order for them is placed late in the season.

SEASONAL POULTRY-KEEPING NOTES.

Storage of Rearing Appliances.—Now that the main hatching and rearing season is completed, all the incubators, brooders, etc., should be carefully cleaned and disinfected before being stored away. Thorough disinfection is essential for, although there may not have been an actual outbreak of disease,

it is possible that parasites and disease-producing organisms have been accumulating in ever-increasing numbers, and to neglect thorough disinfection now may mean an outbreak next season.

The appliances should first be thoroughly washed with a disinfectant solution such as a 5 per cent. solution of Jeyes' Fluid (1 part in 20 parts water) and then fumigated with formaldehyde gas. Details of the process of fumigation are given in Leaflet No. 59.

Care of Poultry Houses.—If possible, poultry houses should be left vacant for a week or two at this time of year and thoroughly cleaned. Where a number of houses are kept it should not be very difficult to arrange for each house to be vacant in turn.

All movable fittings and appliances, such as perches, nest boxes, food troughs, etc., should first be removed from the house and cleaned. Then the interior of the house should be thoroughly scrubbed with a strong disinfectant solution such as a 5 per cent. solution of Jeyes' Fluid. When dry again all the timber in the house should be given an application of a wood preservative such as creosote on the outside and a coating on the inside of fresh lime wash having paraffin oil added at the rate of ½-pint oil to each gallon of lime wash. The roof should be treated with tar. Not only will this treatment increase the "life" of the house, but it will also aid in killing any parasites or germs which may have got into inaccessible cracks or crevices.

Poultry Runs.—The grass on poultry runs should be kept short and palatable for the birds, either by frequent mowing or by running a few sheep, if available, in the pens.

Where outbreaks of parasitic diseases have occurred the stock should be disposed of and the runs ploughed or dug up, limed at the rate of 2 tons burnt lime per statute acre, and, in a few weeks, sown down to grass again. Runs so treated will be fresh and clean for young pullets next season. Where ample scope of ground is available, however, it is a bad practice to confine the birds to a run. The most healthy and productive birds are those which are kept in movable houses which are changed frequently to fresh, clean ground.

Care of Eggs.—It is quite possible to have very few "seconds" eggs even at the hottest period of the year if proper precautions are adopted. Poultry-keepers who have a large proportion of "seconds" should pay particular attention to the following points:—

(1) Do not permit male birds to run with the laying flock.

(2) Keep a close watch for broody hens and remove them from the nests immediately.

(3) Collect the eggs at least three times each day.

(4) Store the eggs in a cool, well-ventilated room and do not expose them to direct sunlight.

(5) Never steep or wash eggs.

(6) Market the eggs as soon as possible.

For further hints on the care of eggs read Leaflet No. 57, and "Talks to Producers" No. 39.

Turkeys.—The care, management, feeding and ailments of turkeys, are dealt with fully in Leaflet No. 37.

ANNOUNCEMENTS AND REMINDERS.

GENERAL.

Inspection of Potato Crops.—Potato growers who wish to have their potato crops inspected with a view to obtaining certificates of purity and health, should apply immediately to either the Ministry or the local Potato Inspector. Crops are inspected, and certificates in respect of satisfactory crops are issued, free.

Sheep Dipping.—The summer sheep-dipping period extends from the 15th June to the 15th August. All sheep must be double dipped between these dates, allowing an interval of not less than seven or more than fourteen days between the two dippings.

Licensing of Bulls.—All bulls born in the second half of 1938 must be either castrated or presented for inspection before the 30th September next. Application forms to have bulls inspected for licences may be obtained from any Police Barracks, or direct from the Ministry.

Accredited Poultry Farms.—Poultry-keepers are asked to co-operate with the Ministry and with one another in an attempt to reduce losses of poultry from disease. The preliminary inspection of farms for accreditation will take place during the summer months, and the birds on those farms which are accorded provisional approval as a result of this inspection will be tested for freedom from Bacillary White Diarrhoea Disease, free of charge. Copies of the Scheme are now available and applications for accreditation must reach the Ministry's offices before 31st July, 1939.

Destruction of Weeds.—Under the Weeds and Agricultural Seeds Act, owners of land are required to destroy noxious weeds, including thistle, dock, ragwort (benweed), and ox-eye or dog daisy. Farms will be inspected by members of the Royal Ulster Constabulary during July and August. Farmers are strongly advised, in their own interests, to have all weeds destroyed as soon as possible.

NAMES AND ADDRESSES OF SECRETARIES AND AGRICULTURAL ORGANISERS OF COUNTY COMMITTEES OF AGRICULTURE.

County.	Name and Address of Secretary or Organiser.
Antrim ...	Mr. R. D. Mackay, N.D.A., N.D.D. (Organiser), Courthouse, Crumlin Road, Belfast.
Armagh ...	Mr. S. Jordan, B.Agr. (Organiser), Russell Street, Armagh.
Down ...	Mr. J. L. M'Whinney, B.Sc., A.R.C.Sc.I. (Organiser), Northern Bank Chambers, May Street, Belfast.
Fermanagh ...	Mr. W. T. M'Clintock, B.Agr. (Organiser), Courthouse, Enniskillen.
Londonderry ...	Mr. T. K. Caldwell (Secretary), Courthouse, Coleraine.
Tyrone ...	Mr. W. Walsh (Secretary), Courthouse, Omagh.

INSPECTION OF GROWING CROPS OF POTATOES, 1939.

For the foreign export market there is an increasing demand for seed potatoes, but the regulations governing the importation of seed into most foreign countries state that the seed supplied must be the produce of crops which have been certified pure and healthy by the Ministry of Agriculture.

There is also an increasing demand from England and Wales for seed potatoes, but a new regulation will shortly be put into force prohibiting the entry of seed potatoes except those which are the produce of crops which have been certified as being at least 99½% pure, and granted a Class I certificate. Arrangements have, therefore, again been made this year whereby growers of potatoes can have their crops inspected for purity and freedom from virus diseases (Leaf Roll and Mosaic), and thus be in a position to supply seed of a standard which will comply with importation regulations and market requirements.

Growers are reminded that each consignment of seed potatoes of a named variety delivered to a merchant for the purpose of his export trade is required to be accompanied by a written guarantee (on Form B.S.37) from the producer that the potatoes are the produce of a crop certified by the Ministry. In the guarantee the number of the crop certificate issued by the Ministry must be stated.

In view of the Potato Marketing Scheme which is now in operation, it may be pointed out that the advantages of producing pure stocks of potatoes are not limited merely to the seed potato trade. It is also a matter of vital importance for the ware trade, for if ware potatoes are to be accepted in cross-Channel markets they should not be composed of mixed varieties, and they should be supplied true to the name of the variety under which they are sold.

Crops of the varieties Black Skerry, Arran Chief and President will not be inspected.

No charge is made for inspection of crops or for certificates.

Applications for the inspection of crops should be made before the end of June on the prescribed forms, which may be had from the Secretary, Ministry of Agriculture, Stormont, Belfast, from the local Police Barracks, or from the Potato Inspector.

SCHOLARSHIPS IN AGRICULTURAL SCIENCE.

The Ministry offers a limited number of scholarships in Agricultural Science for competition this year among young men in Northern Ireland. Each scholarship is of the value of £95 per annum, and is tenable for four years in the Faculty of Agriculture of the Queen's University of Belfast. Successful candidates are afforded the opportunity of securing advanced training in Agricultural Science, and at the end of the scholarship course the student will be in a position to qualify for the degree of B.Agr. The value of the scholarships enables the holders to pay their fees and retain a balance for upkeep purposes.

Candidates must be not less than 17 or more than 25 years of age on 15th November, 1939, but a reasonable extension of the upper age limit may be granted where the Ministry is satisfied that a candidate has had extended experience of practical agriculture. In addition, candidates must have passed the Matriculation Examination or its accepted equivalent. Eligible applicants will be submitted to an examination to test their knowledge of practical agriculture and their knowledge of elementary science as applied to agriculture.

For more detailed particulars regarding these scholarships those interested should communicate with the Secretary, Ministry of Agriculture, Stormont, Belfast. It should be noted that the latest date for the receipt of applications for these scholarships in the Ministry is 15th August, 1939.

SCHOLARSHIPS IN HORTICULTURAL SCIENCE.

Young men in Northern Ireland who wish to specialise in Horticulture in order to be eligible for posts on the horticultural advisory staffs of the County Committees of Agriculture, or for posts of a similar nature in Northern Ireland, should note that the Ministry of Agriculture is offering two valuable

Scholarships for competition this year. Each scholarship is of the value of £640, and is tenable for four years, the first three of which will be spent at the University of Reading where the student will be able to qualify for the degree of Bachelor of Science (Horticulture). The fourth year will be passed at a Horticultural establishment to be selected by the Ministry.

Candidates must be not less than 17 or more than 25 years of age on 1st October, 1939, but a reasonable extension of the upper age limit may be granted where the Ministry is satisfied that a candidate has had extended experience of practical horticulture. Candidates must have passed an examination, such as the Matriculation Examination of the Queen's University, Belfast, recognised by the University of Reading as complying with its regulations in regard to matriculation, and will be submitted to an examination by the Ministry to test their knowledge of horticulture.

More detailed particulars regarding these scholarships can be obtained from the Secretary, Ministry of Agriculture, Stormont, Belfast, and it should be noted that the latest date for the receipt of applications in the Ministry is 19th August, 1939.

SCHOOLS NEWS.

SCHOLARSHIPS TO GREENMOUNT AGRICULTURAL AND HORTICULTURAL COLLEGE, 1939-40.

Each County Committee of Agriculture in Northern Ireland offers for competition Scholarships in Agriculture and Horticulture tenable at Greenmount Agricultural and Horticultural College, Muckamore, County Antrim, for the session 1939-40. An attractive opportunity is thus offered farmers' sons in Northern Ireland to secure a sound training in Agriculture or Horticulture through the medium of these Scholarships, which entitle the holders to free tuition, board and residence.

Greenmount College is situated about one mile from Antrim in a good agricultural district and amidst pleasant surroundings. Classrooms, laboratories, etc., are set apart for the different subjects in which indoor instruction is given, and these are fully equipped with the necessary apparatus. The farm attached to the College extends to over 240 acres, and, besides the instruction provided in practical agriculture and the experience obtained in the running of the farm, the students receive practical instruction in Poultry Husbandry, Dairying, Veterinary Hygiene, Woodwork, Vegetable Growing, Fruit Cultivation and Bee-keeping.

The course is primarily intended to give students a sound knowledge of Agriculture or Horticulture and of the sciences relating thereto, such as will be of use to them in their future careers. It is also an excellent preparation

for students desirous of competing for University Scholarships which are offered each year by the Ministry of Agriculture.

Intending candidates should communicate immediately with the Secretary (or Agricultural Organiser) of the County Committee of Agriculture for the County in which they reside (see page 120 for addresses), from whom the prescribed form of application may be obtained. The completed form of application must be sent to the Secretary or Organiser so as to reach him before 31st July, 1939.

SCHOLARSHIPS TO THE NORTH-WEST SCHOOL, STRABANE.

Each County Committee of Agriculture in Northern Ireland is offering scholarships to young women tenable at the North West School, Strabane, for the session which will open on the 18th July next and terminate on the 29th September, 1939. The holders of scholarships are entitled to free instruction, board and residence, and the course provides a sound practical education in all matters connected with woman's sphere in ordinary farm life, including poultry-keeping, dairying and rural housewifery.

The school is directly controlled by the Ministry and is situated in picturesque surroundings about two miles from Strabane. The equipment and accommodation are of most modern type, and the welfare of pupils is assured, as they are under the supervision of an experienced matron.

Applicants for scholarships must be between sixteen and thirty-five years of age, and those intending to apply should communicate immediately with the Secretary or Agricultural Organiser to the County Committee of Agriculture for the county in which they reside (see page 120 for addresses).

ULSTER DAIRY SCHOOL, COOKSTOWN.

The next session at the Ulster Dairy School commences on 12th September, 1939. An advanced course of instruction in Dairying, Poultry-keeping and Rural Economy is given at this school, which is also under the control of the Ministry.

Copies of the Prospectus and application forms can be had from the Ministry free of charge. Applicants for admission who send application forms now will be admitted on 12th September next.

SEVENTEENTH EGG LAYING TEST AT STORMONT.

The ninth period of four weeks ended on the 9th June, 1939. There was a further decrease in egg production, which was due to broodiness. The total number of eggs lair by the competing birds was 12,143, which gives an average of 16.05 eggs per bird as compared with 18.51 for the previous period and 16.09 for the ninth period of the previous test. Of the 12,143 eggs laid, 10,687 (88.0 per cent.) were scoring eggs, i.e., 2 oz. or over in weight.

The highest sectional average egg production during the ninth period is to the credit of the Rhode Island Reds in Section 5, viz., 17.83 eggs per bird, the White Leghorns in Section 4 and the Rhode Island Reds in Section 6 being next with an average of 16.47 eggs per bird.

The average production during the 36 weeks the test has been in progress, based on the original flock of 756 birds, was 137.36 eggs per bird, as compared with 135.2 for the corresponding 28 weeks of the previous test. The average production of the 696 birds alive at the end of the ninth period was 145.79 eggs per bird.

MORTALITY.—Sixty of the 756 birds accepted for the test have died. This represents a rate of 7.93 per cent. which is 2.66 per cent. lower than the rate for the corresponding 36 weeks of the previous test. Thirty-one pens have each lost one bird, ten pens have each lost two birds and three pens have each lost three birds.

The number of deaths and percentage mortality in the different sections are as follows :—

Section	Breed	No. of Birds	No. of Deaths	Percentage Death Rate
1	White Wyandottes (Open) ...	120	4	3.33
2	,, ,, (Stationholders)	60	6	10.00
3	White Leghorns (Open) ...	60	11	18.33
4	,, ,, (Stationholders) ...	66	9	13.63
5	Rhode Island Reds (Open) ...	174	7	4.02
6	,, ,, ,, (Stationholders) ...	66	8	12.12
7	Any other breed	150	9	6.00
8	Clubs (Any breed)	60	6	10.00

The mortality amongst the different breeds is as follows :—

Breed	No. of Birds	No. of Deaths	Percentage death rate
Rhode Island Red	282	20	7.09
White Wyandotte	198	11	5.55
White Leghorns	126	20	15.87
Brown Leghorn	12	1	8.33
Black Leghorn	6	—	—
Light Sussex	66	1	1.51
Buff Rock	42	5	11.90
Maran	6	2	33.33
Silver Grey Dorking	6	—	—
Welsummer	6	—	—
Ancona	6	—	—

The encouraging feature about this analysis is the low death rate amongst the Light Sussex, the White Wyandottes in Section 1, and the Rhode Island Reds in Section 5. Two and three casualties, respectively, have occurred in two pens of Buff Rocks. The numbers of Brown Leghorns and Marans are too small to justify comment.

The following are particulars of the leading pens in each Section at the close of the ninth period :—

SECTION 1. WHITE WYANDOTTES (Open). 20 pens.

Position	No. of Pen	Name and Address of Owner.	Number of eggs laid.				*Test Score
			Super Grade	1st Grade	2nd Grade	Below 2nd Grade	
1	11	Mr. J. Lenaghan, Tyconnett, Ballynahinch, Co. Down.	602	376	40	—	978
2	1	Mrs. K. Bamforth, Melmount Road, Strabane, Co. Tyrone.	736	215	14	—	951
3	8	Mrs. D. C. Gamble, The Retreat, Coalisland, Co. Tyrone.	446	501	72	—	947
4	12	Mr. J. Lenaghan, Tyconnett, Ballynahinch, Co. Down.	541	398	25	—	939
5	19	Dr. J. Stuart, Killyflue, Ballymena, Co. Antrim.	263	640	135	1	903

SECTION 2. WHITE WYANDOTTES (Stationholders). 10 Pens.

1	30	Mrs. M. J. Veitch, Knockninny, Thompson's Bridge, Enniskillen, Co. Fermanagh.	573	305	27	—	878
2	25	Miss A. Brown, Ballyhill, Crumlin, Co. Antrim.	281	584	56	—	865
3	23	Mrs. J. Armstrong, Keeranbeg House, Donagh, Lisnaskea, Co. Fermanagh.	439	369	40	3	808

SECTION 3. WHITE LEGHORNS (Open). 10 Pens.

1	41	Mr. J. Waugh, Aldfreck, Ballycarry, Belfast.	528	464	60	—	992
2	39	Mr. J. Telford, Drumarkin, Rathfriland, Co. Down.	621	311	43	1	932
3	34	Mrs. H. M. Fletcher, Ashgrove, Lisadian, Hillsborough, Co. Down.	304	457	60	—	761

SECTION 4. WHITE LEGHORNS (Stationholders). 11 Pens.

1	52	Mrs. J. Short, Tullyvalley, Seskinore, Co. Down.	445	441	128	2	886
2	47	Miss I. Gilmer, Rashee, Ballyclare, Co. Antrim.	218	617	113	1	835
3	50	Miss I. J. Magill, Mulloughdrin, Dromara, Co. Down.	327	455	134	5	782

SECTION 5. RHODE ISLAND REDS (Open). 29 Pens.

Position	No. of Pen	Name and Address of Owner.	Number of eggs laid. Super Grade	1st Grade	2nd Grade	Below 2nd Grade	*Test Score
1	66	The Marquis of Hamilton, Baronscourt, Omagh, Co. Tyrone.	448	559	42	—	1007
2	67	Miss J. A. Irwin, Mount Irwin, Tynan, Co. Armagh.	253	721	101	1	974
3	61	Mrs. E. R. Dunwoody, Benmore, Islandmagee, Co. Antrim.	206	675	100	2	881
4	69	Mr. J. M'Cormick, Crosshill, Crumlin, Co. Antrim.	344	491	43	—	835
5	74	Mr. R. J. O'Hanlon, Mullahead, Tanderagee, Co. Antrim.	449	381	272	3	830

SECTION 6. RHODE ISLAND REDS (Stationholders). 11 Pens.

1	83	Mrs. H. H. Dickson, Lower Coagh, Co. Tyrone.	394	596	77	—	990
2	89	Miss S. M'Kee, Ardmillan House, Killinchy, Co. Down.	326	650	115	1	976
3	86	Miss E. M'Clelland, Ballynashee, Ballyclare, Co. Antrim.	276	669	30	—	945

SECTION 7. ANY OTHER PURE BREED. 25 Pens.

1	107	Mr. R. Holmes, Killykergan, Coleraine, Co. Londonderry. (Buff Rock)	328	512	212	3	840
2	106	Mr. R. Holmes, Killykergan, Coleraine, Co. Londonderry. (Buff Rock)	216	581	224	4	797
3	113	Mr. R. Holmes, Killykergan, Coleraine, Co. Londonderry. (Black Leghorn)	299	494	143	4	793
4	93	Mrs. M. Benson, Killymoon, Cookstown, Co. Tyrone. (Light Sussex)	512	250	130	—	762
5	112	Mrs. K. Bamforth, Melmount Road, Strabane, Co. Tyrone. (Brown Leghorn)	116	601	183	1	717

SECTION 8. CLUB ENTRIES. 10 Pens.

Position	No. of Pen	Name and Address of Club.	Number of eggs laid.				*Test Score
			Super Grade	1st Grade	2nd Grade	Below 2nd Grade	
1	126	Portadown Poultry Club, Co. Armagh. (Rhode Island Red)	111	831	135	1	942
2	120	Ballywalter Young Farmers' Club, Co. Down. (Rhode Island Red)	291	543	66	—	834
3	128	Brookeborough Poultry Club, Co. Fermanagh. (White Wyandotte)	299	505	95	2	804

* "Test Score" means the total of the super-grade and first-grade eggs.

Pen No. 66 of Rhode Island Reds in Section 5 entered by the Marquis of Hamilton, retains the leading position in the entire test. Second place has now been taken by Mr. J. Waugh's Pen No. 41 of White Leghorns in Section 3, while Mrs. H. H. Dickson's Pen No. 83 in the Stationholder's Section for Rhode Island Reds is third. Fourth place is occupied by Mr. J. Lenaghan's Pen No. 11 of White Wyandottes in Section 1.

AGRICULTURAL INDEX NUMBERS.

Monthly Index Numbers of Prices of Individual Commodities.

(Corrected for Seasonal Variation).

(Base 1927-29 = 100).

Commodity	1939				1938	1937
	May	April	March	Feb.	May	May
Cattle : Fat	83†	81	79	78	83	91
Store	86	88	89	90	93	92
Cows : Fat	73	71	63	60	71	72
Sheep : Fat	55	51	62	59	66	69
Bacon Pigs	76†	74†	74	78	81	78
Hens and Chickens ...	74	73	70	71	77	73
Ducks	99	87	95	91	99	91
Eggs	98	105	92	74	108	82
Milk :						
For Manufacture ...	*	89	85	86	94	82
Whole	115	118	110	108	115	112
All	*	103	99	100	101	92
Farmers' Butter ...	80	75	76	77	85	67
Potatoes	91	108	95	93	112	154
Oats	63	66	69	74	87	97
Hay	80	79	77	78	75	91
Oat Straw	85	88	84	85	88	103

Revised Index Numbers taking Account of Payments under the Cattle Subsidy, and Government Payments for Milk.

Cattle : Fat	95†	94	91	90	95	101
Milk :						
For Manufacture ...	*	99	109	108	112	98
All	*	108	109	108	113	103

* Not yet available. † Provisional.

Monthly Index Numbers of Prices of Individual Commodities

(Uncorrected for Seasonal Variation).

(Base 1927-29 = 100).

Commodity	1939				1938	1937
	May	April	March	Feb.	May	May
Cattle : Fat	89†	85	80	79	90	98
Store ...	88	89	89	89	95	93
Cows : Fat	76	74	66	64	74	76
Sheep : Fat	63	61	69	62	74	78
Bacon Pigs	81†	82†	81	81	87	85
Hens and Chickens ...	77	78	76	75	80	74
Ducks	98	85	95	91	95	87
Eggs	61	63	57	67	67	51
Milk : For Manufacture ...	*	88	95	100	82	72
Whole	104	121	121	121	104	100
All	*	104	109	113	90	81
Farmers' Butter ...	80	79	80	81	85	68
Potatoes	96	104	86	90	114	158
Oats	67	68	70	71	93	104
Hay	81	81	77	77	77	93
Oat Straw	83	89	86	88	86	102

Revised Index Numbers taking Account of Payments under the Cattle Subsidy, and Government Payments for Milk.

Cattle : Fat	102†	98	93	92	102	109
Milk : For Manufacture ...	*	98	121	126	98	86
All	*	109	121	123	100	91

* Not yet available. † Provisional.

PRICES USED IN THE CALCULATION OF THE INDEX NUMBERS.

Commodity	1927–29	1939				1938	1937
		May	April	March	Feb.	May	May
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Cattle :							
Fat, per live cwt.	45 2	40 2†	38 5	36 4	35 10	40 8	44 4
Store, per head ...	223 7	196 10	198 5	198 2	199 4	213 4	207 11
Cows : Fat, per head	336 10	254 7	248 8	223 11	214 8	248 2	254 4
Sheep : Fat, per head	53 6	33 7	32 8	36 10	33 1	39 7	41 11
Bacon Pigs, per dead cwt. ...	78 8	64 1†	64 2†	63 6	63 11	68 8	67 1
Hens & Chickens per head ...	3 0½	2 4¼	2 4½	2 3¾	2 3¼	2 5	2 3¼
Ducks, per head	2 6½	2 5¾	2 1¾	2 5	2 3¾	2 5	2 2½
Eggs, per 120 ...	13 6	8 2	8 5	7 7	9 1	9 0	6 11
Milk : For Manufacture, per gal.	0 6¼	*	0 5½	0 6	0 6¼	0 5¼	0 4½
Whole, per gal.	1 0	1 0½	1 2½	1 2½	1 2½	1 0½	1 0
Farmers' Butter, per lb. ...	1 5½	1 2	1 1¾	1 2	1 2¼	1 3	1 0
Potatoes, per cwt.	3 5	3 3	3 6	2 11	3 1	3 10	5 4
Oats, per cwt.	8 1	5 5	5 6	5 8	5 9	7 7	8 5
Hay, per ton ...	73 8	59 7	59 6	56 6	57 1	56 9	68 6
Oat Straw, per ton	47 6	39 8	42 5	41 0	41 10	41 0	48 3

* Not yet available. † Provisional.

MINISTRY OF LABOUR RETAIL PRICES AND INDICES.

The Ministry of Labour general index of retail prices of food in Great Britain and Northern Ireland at May 1st was 34 per cent. above the level of July, 1914, as compared with 35 per cent at April 1st, 1939, and 39 per cent. at April 30th, 1938. The principal changes recorded during the month related to milk, butter and bacon, which were cheaper, but these reductions were largely counterbalanced by increases in the prices of sugar and potatoes.

The following table shows the average retail prices of certain foods in large towns and villages on May 1st, 1939, April 1st, 1939, and April 30th, 1938, with the corresponding increases over July, 1914.

Article.	May 1st, 1939	Apr. 1st, 1939	Apr. 30th, 1938	Increase over July, 1914.		
				May 1st, 1939	Apr. 1st, 1939	Apr. 30th 1938
	Per lb. s. d.	Per lb. s. d.	Per lb. s. d.	Per cent.	Per cent.	Per cent.
Beef, British—						
Ribs	1 2¼	1 2¼	1 2½	42	42	47
Thin Flank	0 7½	0 7½	0 7¾	15	14	19
Beef, Chilled or Frozen—						
Ribs	0 9½	0 9½	0 9¾	31	31	33
Thin Flank	0 4¾	0 4¾	0 5	1	Nil	3
Mutton, British—						
Legs	1 3½	1 3¼	1 4	49	48	54
Breast	0 7½	0 7½	0 8	16	15	22
Mutton, Frozen—						
Legs	0 10¼	0 10¼	0 10½	50	50	53
Breast	0 4	0 4	0 4¼	Nil	— 1*	2
Bacon (Streaky) ...	1 3	1 3¼	1 3½	33	36	39
Butter—Fresh	1 4½	1 4¾	1 4¾	13	15	15
Salt	1 3¼	1 3½	1 3½	7	10	10
Cheese	0 10½	0 10½	0 10¾	21	22	25
	Per qt.	Per qt.	Per qt.			
Milk	0 6½	0 6¾	0 6¾	85	94	92
	Each	Each	Each			
Eggs (Fresh)	0 1¼	0 1¼	0 1½	9	6	12
	Per 4 lb.	Per 4 lb.	Per 4 lb.			
Bread	0 8½	0 8½	0 9½	46	46	62
	Per 7 lb.	Per 7 lb.	Per 7 lb.			
Flour	1 1¾	1 1¾	1 3¾	30	30	48
Potatoes	0 6½	0 6¼	0 6¼	35	28	31

* Decrease.

The cost of maintaining unchanged the pre-War standard of living of working-class families at May 1st was approximately 53 per cent. above the level of July, 1914, as against 53 per cent. at April 1st, and 56 per cent. at April 30th, 1938.

PRICES OF FEEDING STUFFS AT SPECIFIED CENTRES.

The following table shows the retail cash prices per cwt. of Feeding Stuffs at 1st June, 1939, in ten representative centres in Northern Ireland.

	Antrim	Armagh	Ballymena	Belfast	Castlewellan	Coleraine	Dungannon	Enniskillen	Omagh	Strabane
Protein Foods :	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Linseed (whole) ...	—	16 0	16 0	16 0	17 6	18 6	17 0	16 6	17 0	—
Linseed Cake, home-made ...	—	12 6	11 6	11 0	—	12 0	11 0	12 0	12 6	—
Linseed Cake, foreign ...	11 0	12 0	11 0	10 6	11 0	11 6	10 0	10 0	11 0	10 9
Linseed Cake Meal ...	11 0	12 6	11 0	11 0	11 0	11 6	12 0	12 0	11 6	11 6
Cotton Cake, decorticated ...	—	—	9 6	10 6	10 0	10 0	10 6	10 6	10 0	10 0
Earthnut Cake, decorticated ...	8 9	—	9 0	9 0	—	8 9	9 0	9 6	9 6	8 6
Soya Bean Meal (extracted) ...	10 0	10 6	10 6	10 0	—	11 0	10 0	—	10 0	11 0
Fish Meal (60% protein) ...	17 6	17 0	16 6	16 6	—	16 6	17 0	16 6	16 9	16 6
Meat Meal (60% protein) ...	16 6	15 0	13 3	13 6	14 0	16 6	15 6	—	15 0	16 3
Meat and Bone Meal (40% protein) ...	—	10 0	9 3	9 0	—	10 0	9 6	—	—	10 6
Medium Protein Foods :										
Palm Kernel Cake	—	—	8 6	7 6	—	7 6	—	—	9 0	—
Palm Kernel Meal	—	9 0	8 6	7 6	—	7 6	—	—	9 0	—
Starchy Foods :										
Maize (whole)	6 3	—	7 0	6 6	—	7 3	6 9	7 3	—	7 0
Maize Meal	6 9	7 0	7 0	7 0	6 9	7 3	7 0	7 3	7 0	7 3
Maize Flaked	7 3	7 9	7 6	7 6	7 6	7 9	7 9	8 0	8 0	8 0
Wheat (whole)	6 6	6 6	6 0	6 0	6 0	6 3	6 3	7 6	7 0	6 0
Bran, Red	7 3	7 6	7 0	7 6	—	7 6	7 6	8 6	8 0	7 9
Bran, White	8 6	8 6	8 3	9 0	8 9	9 0	8 6	10 6	9 9	9 6
Pollard, Brown	7 3	7 6	7 0	7 6	—	7 0	7 6	7 9	8 0	6 9
Pollard, White	—	8 0	7 9	8 6	7 9	7 6	8 9	8 3	9 0	8 9
Barley Meal	7 9	7 6	7 3	7 6	7 3	7 9	7 6	8 0	7 6	7 9
Tapioca Root Flour	—	—	6 6	6 6	—	—	—	—	—	—
Oats (whole)	7 6	7 0	6 0	7 0	5 6	6 6	7 6	7 4	5 3	6 0
Crushed Oats	8 0	7 6	6 6	7 6	5 9	6 9	8 0	8 0	7 6	7 0

Non-Concentrates : The average prices at representative markets at the beginning of June, 1939, were as follows :— Potatoes (Main Crop), 2/10½d. per cwt.; Upland Hay, 68/9 per ton; Meadow Hay, 57/11 per ton; Oat Straw, 42/10 per ton.

AVERAGE PRICES OF FEEDING STUFFS.

The following table shows the average retail cash prices per cwt. of feeding stuffs at 1st June, 1939, with comparative prices as at the first of the previous month; the costs per unit of protein equivalent and of starch equivalent are also given in respect of each month.

	Protein Equivalent	Starch Equivalent	Average price per cwt. at 1st June, 1939	Average price per cwt. at 1st May, 1939	Cost per unit of protein equivalent: June,	Cost per unit of protein equivalent: May	Cost per unit of starch equivalent: June	Cost per unit of starch equivalent: May
Protein Foods			s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Linseed	18.75	119.2	16 9	16 9	17 10	17 10	2 10	2 10
Crushed linseed	18.75	119.2	17 11	18 0	19 1	19 2	3 0	3 0
Linseed cake (home made)	24.6	74.0	11 10	12 6	9 7	10 2	3 2	3 4
Linseed cake (foreign)	27.05	74.5	10 10	11 4	8 0	8 4	2 11	3 1
Linseed cake meal	24.6	74.0	11 7	11 8	9 5	9 6	3 2	3 2
Decorticated Cotton cake	34.65	68.4	10 2	10 0	5 10	5 9	3 0	2 11
Decorticated Earthnut cake	41.3	73.0	9 0	9 2	4 4	4 5	2 6	2 6
Extracted Soya bean meal	38.3	64.0	10 5	10 5	5 5	5 5	3 3	3 3
Fish meal (60% protein)	53.0	58.9	16 9	16 9	6 4	6 4	5 8	5 8
Meat meal (60% protein)	55.0	61.0	15 2	15 2	5 6	5 6	5 0	5 0
Meat & bone meal (40% protein)	36.0	44.0	9 9	9 10	5 5	5 5	4 5	4 6
Medium Protein Foods								
Palm kernel cake	16.95	73.2	8 2	8 6	9 8	10 0	2 3	2 4
Palm kernel meal	16.55	71.3	8 4	8 8	10 1	10 6	2 4	2 5
Starchy Foods								
Maize	7.65	77.6	7 0	7 0	18 4	18 4	1 10	1 10
Maize meal	7.65	77.6	7 1	7 4	18 6	19 2	1 10	1 11
Flaked maize	9.2	84.0	7 9	7 10	16 10	17 0	1 10	1 10
Wheat	9.6	71.6	6 5	6 4	13 4	13 2	1 10	1 9
Red bran	10.0	42.6	7 7	7 10	15 2	15 8	3 7	3 8
White bran	10.0	42.6	9 1	9 1	18 2	18 2	4 3	4 3
Brown pollard	10.85	56.5	7 4	7 6	13 6	13 10	2 7	2 8
White pollard	10.85	56.5	8 4	8 5	15 4	15 6	2 11	3 0
Barley meal	7.3	71.4	7 7	7 8	20 9	21 0	2 2	2 2
Oats	7.6	59.5	6 8	6 7	17 6	17 4	2 3	2 3
Crushed oats	7.6	59.5	7 5	7 5	19 6	19 6	2 6	2 6
Tapioca root flour	1.2	83.5	6 6	7 1	108 4	118 1	1 7	1 8
Non-Concentrates								
Potatoes	0.85	18.5	2 10½	3 5	67 2	80 4¾	3 1	3 8¼
Upland hay	4.9	29.0	3 5	3 1	13 11	12 7	2 4¼	2 1½
Meadow hay	4.7	37.0	2 10¾	2 6	12 4	10 7¾	1 7	1 4¼
Oat straw	0.5	21.0	2 1¾	1 11¼	85 10	77 6	2 1	1 10

The object of the foregoing tables, besides providing information regarding the prices of feeding stuffs and the trend of prices, is to give purchasers a

guide as to the economic purchase of supplies. It should be understood that the price per ton is not a sound basis on which to judge whether or not a particular food or grade of a particular food is good value for money. The composition of the foods is the only basis on which different grades can be compared. The value of foods of different kinds, but of the same nature in reference to market prices, can also be compared on this basis.

In the case of an artificial manure which supplies only one fertilising ingredient as, for example, sulphate of ammonia, which supplies nitrogen, the cost of the unit of nitrogen at the price charged can be determined quite readily by dividing the price per ton by the percentage of nitrogen in the sample, and the figure thus obtained is the cost of a unit of nitrogen. By this method the most economical source of nitrogen can be ascertained. Similarly, in the cases of phosphatic and potassic manures.

With feeding stuffs, however, the same method cannot be applied to determine comparative values. This is because every feeding stuff contains three important food constituents in varying proportions. These are (1) carbohydrates, (2) oils or fats, and (3) proteins or albuminoids. The carbohydrates comprise a group of substances such as starch, sugar and cellulose. These substances supply heat or energy to the animal, and the surplus goes to form fat. They are the fuel which the animal requires to keep the body "fires" burning. The oils of a feeding stuff are also heat and energy suppliers, and the surplus is stored as fat. The oils are approximately 2½ times more valuable than the carbohydrates as heat and energy producers, but excess in a ration may lower its digestibility and cause digestive troubles. The proteins are the most valuable and most expensive food constituent. They contain nitrogen and are the part of the food from which products which contain protein are chiefly made. Thus the protein products, such as lean meat, milk and eggs, are formed principally from protein, and young, growing animals, dairy cows and laying hens must have an adequate quantity of protein for full growth, development and production.

While all animals require a certain amount of carbohydrates, oils and proteins, the relative amounts depend on the class of stock. For example, a two-year-old fattening bullock requires much less protein than a dairy cow in milk and a fattening chicken less than a laying pullet.

There are wide differences in the composition of the different kinds of feeding stuffs. Some are rich in carbohydrates and, therefore, particularly valuable for fattening purposes. These include oats, maize, barley and wheat, and their products. Others are rich in protein and are valuable for producing flesh, milk and eggs. These include decorticated cotton cake, decorticated earthnut cake, meat meal and soya bean meal.

In the following table the composition of some of the commonly used feeding stuffs is shown—

	Water.	Protein.	Oil.	Carbohydrates.
Non concentrates				
Swede turnips ...	88	1	0.2	9
Potatoes	75	2	0.1	21
Cabbage	89	1.5	0.5	8
Oat Straw	14	4	2	37
Meadow hay ...	10	10	3	45
Pasture grass ...	80	3.5	0.8	10
Fattening Foods				
Crushed oats ...	13	9	6	60
Maize meal ...	12	10	4	70
Barley meal ...	13	12	2	66
Pollard ...	13	15	5	57
Flesh forming foods				
Decorticated Cotton cake	9	40	9	26
Decorticated Earthnut cake	10	46	7	23
Meat meal ...	11	60	6	—
Soya bean meal ...	11	44	1.5	32

The problem confronting the purchaser of feeding stuffs, who is concerned with the business of getting best value for money, is one which is much more difficult to solve than is the case with artificial fertilisers. There are at least four aspects of the problem to be considered:

(1) The quality of the different foods offered for sale. This can be determined by reference to the particulars of composition which a seller must give a purchaser in accordance with the Fertilisers and Feeding Stuffs Act.

(2) The physical condition of the foods, and if fresh or stale.

(3) The suitability of the foods for the purpose in view.

(4) The comparative values of the foods at the prices quoted.

The chief concern of this section of the Report is comparative values and, therefore, that aspect of the problem will be considered specifically.

The proteins play a part in the nutrition of the animal which cannot be taken by either carbohydrates or oils. In addition to this, the proteins, carbohydrates and oils have very different values for the production of energy or fat. It therefore follows that the simple procedure of totalling the percentages of these three ingredients and dividing this total into the price per ton in order to obtain a value for a unit of the food-stuff is quite unsound. Various methods have been used to compare the values of different feeding stuffs, but none is completely satisfactory. For practical purposes the least cumbersome is the

method whereby the food-stuffs are placed in groups of similar composition, and the values of the members of each group are then compared by consideration of (a) their protein equivalents, and (b) their starch equivalents. The starch equivalent is the number of pounds of starch which would be required to produce the same amount of "fat" in an animal as 100 pounds of the food-stuff in question. It is essentially a measure of the fat-producing value of the food-stuff. The protein equivalent is the number of pounds of digestible true protein, plus half the number of pounds of non-protein nitrogenous substances such as amides, present in 100 pounds of the foodstuff. It is a measure of the value of the food-stuff to the animal as a source of protein.

By this method all foods can be reduced to comparable standards based on (1) the protein equivalent, and (2) the starch equivalent.

The next stage in comparing values is to determine the cost of a unit of protein equivalent and of starch equivalent in the different foods which are being compared, and to enable the reader to do this the protein and starch equivalent figures for the different foods are given in the table on page 133, and also the cost per unit of protein equivalent and of starch equivalent in each case. These costs have been determined by dividing the protein equivalent figure and the starch equivalent figure, respectively, into the current price per ton, and the lower the quotient figures thus obtained the cheaper is the particular food as a source of protein or of starch equivalent as the case may be.

However, it would be quite misleading to compare the cost of a unit of protein equivalent in a protein food (which is purchased principally for its protein) with the cost of a similar unit in a starchy food. In other words, foods such as maize meal and pollard cannot be compared on the basis of cost of protein equivalent with foods such as decorticated cotton cake and meat meal.

The best course to adopt is to consider for what purpose the particular food is required, decide what foods are suitable for that purpose, examine the samples of these different foods which are offered and, if all appear to be satisfactory, apply the unit value system of determining which one provides protein equivalent or starch equivalent at the cheapest rate. A few examples may be helpful in explaining the procedure.

(1) Suppose it is intended to purchase a protein food for the purpose of balancing a ration for dairy cows. The protein foods suitable for dairy cows are decorticated cotton cake, decorticated earthnut cake and soya bean meal. From the table on page 133 it is seen that at the current average prices of these foods the cost of the unit of protein equivalent in each is as follows:—

Decorticated cotton cake	...	...	5/10d.
Decorticated earthnut cake	...	...	4/4d.
Soya bean meal	...	...	5/5d.

Accordingly decorticated earthnut cake is the cheapest source of protein.

(2) A protein food is required as a milk substitute to balance the ration for fattening pigs. The foods suitable for this purpose are soya bean meal, meat meal and meat and bone meal. Referring again to the table, it is seen that at the current average prices of these foods the cost of the unit of protein equivalent in each is as follows:—

Soya bean meal	...	...	5/5d.
Meat meal (60% protein)	...	...	5/6d.
Meat and bone meal (40% protein)	...		5/5d.

This shows that at the respective prices per ton ruling at present, all three supply protein at about the same cost. It should be noted, however, that in the case of meat meal and meat and bone meal, the former should be used in preference to the latter, since 1 cwt. of it in the meal mixture will provide as much protein as 1½ cwt. of the latter. Besides, having usually a lower content of oil than the 40% protein grade, the 60% meat meal is likely to prove more satisfactory than the lower grade, both from the thriving point of view and as regards producing bacon of good quality. The use of the lower grade of meat and bone meal in mixtures for the feeding of pigs is not recommended.

(3) Whether is it more economical to feed white pollard than brown pollard or white bran than red bran, even though the prices per ton of the white grades are higher than those of the brown or red grades? The figures in the table show that the cost of both the unit of protein equivalent and of starch equivalent is less for the brown pollard than the white, and less for the red than the white bran. It follows, therefore, that at current prices the coloured grades of pollard and bran are cheaper than the white grades. It should be remembered in this connection, however, that the comparison of costs in these cases has been made on the assumption that the composition of the coloured grades is the same as that of the white grades. A pollard containing say, 8 per cent. fibre, even if of a white colour, would have a far lower feeding value than one containing only 4 per cent. of fibre. Colour is not a guide as to the feeding value of pollard or bran.

PRICES OF FERTILISERS AT SPECIFIED CENTRES.

The following table shows the retail cash prices per ton of fertilisers at 1st June, 1939, at representative centres in Northern Ireland.

	Belfast	Londonderry	Antrim	Armagh	Ballymena	Banbridge	Coleraine	Dungannon	Enniskillen	Omagh	Strabane
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Nitrogenous Manures :											
Nitrate of Soda (15.5% N.)	8 0 0	8 0 0	8 10 0	8 10 0	9 0 0	8 5 0	9 0 0	10 0 0	9 10 0	8 10 0	8 10 0
Sulphate of Ammonia (20.6% N.)	7 14 0	7 14 0	8 10 0	8 5 0	8 0 0	8 0 0	8 0 0	8 10 0	8 5 0	8 0 0	8 10 0
Nitro Chalk (15.5% N.)	7 10 6	7 10 6	8 5 0	8 5 0	8 10 0	7 17 6	8 10 0	9 0 0	8 15 0	8 10 0	8 12 6
Phosphatic Manures :											
Superphosphate (16% S.P.A.) ...	3 13 9	3 18 9	3 15 0	3 15 0	3 15 0	3 12 6	3 15 0	4 0 0	4 0 0	4 0 0	4 0 0
Semsol (5% S.P.A., 15½% P.A.)	3 0 0	3 5 0	3 10 0	3 10 0	3 5 0	3 5 0	3 15 0	3 5 0	3 10 0	3 10 0	3 10 0
*Basic Slag (16% to 17% P.A.) ...	2 18 0	2 18 0	—	—	—	—	—	—	—	—	—
*Basic Slag (18% to 20% P.A.) ...	3 6 0	3 6 0	—	—	—	—	—	—	—	—	—
Gafsa Rock Phosphate (26% P.A.) ...	2 12 6	2 18 9	3 10 0	3 2 6	3 0 0	2 17 6	3 7 6	3 0 0	3 5 0	3 0 0	3 5 0
Potash Manures :											
Kainit (14% P.) ...	3 2 6	3 5 0	—	—	3 10 0	3 10 0	3 15 0	3 10 0	3 17 6	3 12 6	3 10 0
Potash Salts (20% P.) ...	4 0 0	—	4 7 6	4 10 0	4 7 6	4 7 6	4 15 0	4 10 0	4 15 0	4 10 0	4 10 0
Potash Salts (30% P.) ...	5 5 0	5 11 3	5 15 0	5 15 0	5 12 6	5 15 0	6 10 0	6 0 0	6 0 0	5 12 6	5 17 6
Muriate of Potash (50% P.)	8 10 0	8 16 3	8 17 6	9 5 0	8 17 6	8 15 0	8 15 0	9 0 0	9 10 0	9 0 0	9 0 0
Agricultural Salt ...	3 0 0	—	2 7 6	3 0 0	2 10 0	2 10 0	—	3 0 0	2 0 0	—	3 0 0

Abbreviations : N.—Nitrogen. S.P.A.—Soluble Phosphoric Acid. P.A.—Phosphoric Acid. P.—Potash.

* If obtained under the Land Fertility Scheme, the price of British made basic slag will be 25 per cent. less than the figures quoted, since a subsidy equivalent to one-quarter is payable. The prices for British basic slag, c.i.f. Belfast and Londonderry, are fixed by the Land Fertility Committee and are the same at both these ports. The retail prices at Belfast and Londonderry given above are based on these c.i.f. prices plus the charges approved by the Committee for unloading and distribution. The cost at other centres can be ascertained by adding the cost of carriage from the port to the prices at Belfast or Londonderry.

The cost of the unit of fertilising ingredient is determined by dividing the price per ton by the percentage of the ingredient contained in the manure, and this method of determining values is the only sound basis on which two different manures or two grades of the same manure, supplying the same fertilising ingredient, can be compared. The price per ton is not a reliable guide as to which is the better value for money. For example, at the prices ruling at Belfast for the various manures, as shown on the table on page 138, the costs of the units of the fertilising ingredients are as follow:—

Nitrate of Soda (15.5% N.)	10/3¾	(Nitrogen)
Sulphate of Ammonia (20.6% N.) ...	7/6¼	,,
Nitro Chalk (15.5% N.)	9/8¼	,,
Superphosphate (16% S.P.A.)	4/7¼	(Phosphoric Acid)
Semsol (5% S.P.A., 15½% P.A.)	2/11	,,
Basic Slag (16% P.A.)	3/7½	,,
Basic Slag (19% P.A.)	3/5¾	,,
Gafsa Rock Phosphate (26% P.A.) ...	2/0¼	,,
Kainit (14% P.)	4/5½	(Potash)
Potash Salts (20% P.)	4/–	,,
Potash Salts (30% P.)	3/6	,,
Muriate of Potash (50% P.)	3/4¾	,,

It is seen that the price of 14% Kainit is £3 2s. 6d. per ton, and of 30% Potash Salts is £5 5s. 0d. per ton, and it might be concluded that the Kainit was the better value for money. This is not so. The 30% Potash Salts contains more than twice as much Potash as the Kainit, and is, therefore, a cheaper source of potash when the price is even double that at which Kainit is offered. The cost of a unit of potash in the 30% Potash Salts is seen to be only 3/6d., whereas the cost of a unit of potash in Kainit is 4/5½d. At the prices ruling for these manures, 30% Potash Salts is, therefore, better value for money than Kainit. Similarly, it is seen that at the prices prevailing at Belfast, Gafsa Rock Phosphate is the cheapest source of phosphoric acid and Sulphate of Ammonia is the cheapest source of Nitrogen.

In connection with the costs of the units of phosphoric acid, as shown in the above table, it should be noted that in the case of Superphosphate, the cost is that of a unit of soluble phosphoric acid; whereas in the cases of Basic Slag, Semsol, and Gafsa Rock Phosphate, the figures represent the cost of a unit of insoluble phosphoric acid. It would not, therefore, be correct to compare the unit price of the phosphoric acid in Superphosphate with those of the phosphoric acid in the other three. It should also be noted that the costs of the units of phosphoric acid in basic slag will be less than the figures shown above, if that manure is purchased under the terms of the Land Fertility Scheme.

TRADE AND PRICES OF LIVE STOCK AT BELFAST AUCTION MARTS.

The offerings of beef cattle at the Belfast marts during May were fairly steady, but of smaller dimensions than those of the previous month. Prices rose sharply at sales held during the first week of May, and with business ruling on firm lines the improved levels were well maintained throughout the month. The weighted average price per live cwt. was 1/3d. higher than that for April at 40/10d., and was only 5d. below the figure for the corresponding month of last year. The quality of the fat cattle shown last month was rather variable, but the general standard was improved in the latter half of the month, particularly at the close, when a fair proportion of high class cattle were included in the Annual Shows and Sales of baby beef and early-maturity cattle. Prices during May generally ranged from 41/6d. to 47/- for top quality animals, with an extreme top of 50/- per live cwt. for competition animals at the end of the month, while good commercial cattle fetched from 40/- to 44/6d. and rougher under-finished types from 38/6d. to 43/6d. per live cwt. The following table shows the average prices for fat cattle during last month, compared with those ruling at the corresponding dates a year ago:—

Week ended	*per cwt.*	*Week ended*	*per cwt.*
6th May, 1939	40/3	7th May, 1938	41/1
13th ,, ,,	39/11	14th ,, ,,	40/5
20th ,, ,,	41/2	21st ,, ,,	41/9
27th ,, ,,	41/2	28th ,, ,,	41/8
3rd June, 1939	41/9	4th June, 1938	41/7
Average for month	40/10	Average for month	41/3

Supplies of store cattle at the saleyards were heavier than in April and trade was fairly steady despite the rather variable quality of the offerings. The continuance of the warm and dry weather, with the consequent shortage of grass, however, resulted in a slackening in the demand for all but the best forward animals at the close of the month.

Dairy cattle were shown in rather smaller numbers during last month than in the previous month, but business remained dull throughout the month.

Large pennings of fat sheep and lambs included further increased offerings of this season's lambs, and a brisk demand was maintained for the best animals, but towards the end of the month trade for the poorer types eased somewhat.

Price ranges for fat cows, store cattle, dairy cattle and sheep and lambs are shown in the table on the next page.

PRICES OF OTHER STOCK AT THE BELFAST AUCTION MARTS.

Description.		Week ended 6-5-39	Week ended 13-5-39	Week ended 20-5-39	Week ended 27-5-39	Week ended 3-6-39
Fat Cows	Range of 1st quality	£13 to £18-10	£13 to £18-15	£13 to £18	£14 to £19	£14 to £19-10
	,, 2nd ,,	£10 to £14-10	£10 to £15	£10 to £14	£11 to £15	£10 to £15
Store Cattle :						
Large Forward Stores ...	Range of 1st quality	£14 to £16-5	£14-10 to £16-15	£14-10 to £16-17/6	£14-10 to £16	£14-10 to £15-15
	,, 2nd ,,	£12-5 to £14	£12-10 to £14	£10 to £14	£13 to £14-5	£12-10 to £14
Younger Stores ...	,, 1st ,,	£10-10 to £12-10	£10 to £12-5	£9-10 to £12	£10 to £12-10	£10 to £12
	,, 2nd ,,	£8-10 to £10	£7-10 to £9-10	£7-5 to £8-10	£7-10 to £9-10	£7 to £9
Dairy Cattle :						
Milch Cows	Range of 1st quality	£20 to £26	£19 to £24	£19 to £23-5	£19 to £24-10	£20 to £25-10
	,, 2nd ,,	£15 to £19	£15 to £18	£15 to £18	£15 to £18	£16 to £19
Springers	,, 1st ,,	£19 to £24	£19 to £23	£17 to £22	£17 to £19	£18 to £22-10
	,, 2nd ,,	£15 to £18	£15 to £18	£15 to £16-10	£14 to £16-10	£15 to £17-10
Sheep and Lambs :						
Crossbred & White Ewes	Range of 1st quality	33/– to 45/–	35/– to 46/–	35/– to 43/–	35/– to 48/–	35/– to 45/–
	,, 2nd ,,	27/– to 39/–	30/– to 38/–	28/– to 37/–	28/– to 39/–	28/– to 38/–
Blackface Ewes ...	,, 1st ,,	30/– to 39/–	30/– to 37/6	27/– to 42/–	30/– to 40/–	28/– to 35/–
	,, 2nd ,,	23/– to 31/–	22/– to 32/–	20/– to 35/–	24/– to 34/–	20/– to 27/6
Crossbred & White Lambs	,, 1st ,,	42/– to 56/–	40/– to 54/–	40/– to 52/–	37/– to 51/6	35/– to 50/–
	,, 2nd ,,	34/6 to 44/–	30/– to 44/–	32/– to 44/–	32/– to 39/–	28/– to 42/–
Crossbred & White Hoggets	,, 1st ,,	45/– to 58/6	42/– to 55/–	42/– to 50/–	38/– to 47/6	32/– to 36/–
	,, 2nd ,,	40/– to 44/–	35/– to 40/–	35/– to 40/–	32/– to 37/6	28/– to 31/–
Blackface Hoggets ...	,, 1st ,,	30/– to 47/–	25/– to 40/6	——	23/– to 41/–	20/– to 33/–
	,, 2nd ,,	21/– to 36/–	20/– to 32/–	15/– to 28/–	19/– to 29/–	15/– to 24/–
Rams	,, 1st ,,	35/– to 47/–	35/– to 47/–	38/– to 48/–	35/– to 49/–	35/– to 49/–
	,, 2nd ,,	30/– to 40/–	30/– to 42/–	32/– to 41/–	30/– to 42/–	30/– to 39/–

PRICES OF LIVE STOCK.

Average prices of Live Stock at Fairs during the month of May, 1939.

Date	Fair	Calves (under 9 months)	Store Cattle	Fat Cattle (18 months and over)	Springers		Milch Cows	Fat Lambs (under 12 months)	Fat Sheep (over 2 years)	Young Pigs
					Cows	Heifers				
		Per head	Per cwt. Live weight	Per cwt. Live weight	Per head	Per head	Per head	Per head	Per head	Per head
		£ s.			£ s.	£ s.	£ s.	£ s.	£ s.	£ s.
2	Omagh	7 1/9	39/- to 41/-	39/-	15 10	16 10	15 0	†2 2	†1 12/6	—
3	Londonderry ...	—	35/- to 44/-	37/-	17 0	—	—	—	—	1 5
3	Rathfriland ...	6 17/6	37/- to 40/-	38/-	16 15	15 0	15 0	†1 11/3	—	1 11/3
5	Moy	—	35/- to 42/-	39/-	15 15	15 10	14 15	—	*1 15	—
									‡0 17/6	
8	Irvinestown ...	7 6	35/- to 38/-	38/-	14 0	13 10	—	—	*1 15	1 10
									†1 12/6	
10	Crossgar	—	37/- to 40/-	—	17 10	14 10	15 0	—	—	1 18
10	Enniskillen ...	6 8/6	34/- to 40/-	40/-	14 0	14 0	12 10	—	*2 0	1 12/6
10	Kilrea	5 15/9	35/- to 42/-	39/-	18 0	16 10	16 0	†2 2	—	1 11
12	Ballygawley ...	—	28/6 to 40/-	39/6	13 10	—	13 0	—	†1 16	1 16
12	Strabane	6 10	38/- to 39/-	38/-	15 0	—	13 5	—	—	—
15	Camlough ...	6 0	36/- to 41/-	38/6	16 0	15 0	13 0	†1 7/6	†1 10	—
17	Claudy	—	34/- to 41/-	38/-	11 0	—	—	—	—	1 7/6
17	Lisnaskea ...	5 15/6	31/- to 37/6	36/6	15 0	14 0	13 0	—	—	1 13
18	Ballymoney ...	7 7/6	36/- to 40/-	—	15 10	20 0	14 5	—	—	1 10
18	Ballynahinch ...	—	37/- to 39/-	—	17 10	17 0	16 0	—	—	2 0
20	Portadown ...	5 15	35/- to 38/-	40/-	17 0	16 0	17 0	—	—	1 15
22	Fintona	7 2	40/- to 42/-	42/-	16 0	15 0	15 10	†1 18	†1 15	1 15
22	Moneymore ...	6 13/6	38/- to 44/-	39/-	14 5	13 2/6	—	†1 12	†1 14/6	1 11/3
25	Antrim	—	39/- to 42/6	40/-	19 0	18 10	—	—	—	1 10
26	Castlederg ...	6 5	35/- to 38/-	38/-	12 10	—	—	†1 7/6	†1 10	1 10
26	Killylea	—	38/- to 40/-	40/6	16 0	—	15 10	—	†1 10	—
27	Ballymena ...	7 5/3	33/6 to 42/-	—	22 0	19 0	21 0	—	—	1 14

* Long Wools. † Downs and Crossbreds. ‡ Mountain.

SHIPMENTS OF LIVE STOCK.

Statement showing the Shipments of Live Stock from Northern Ireland ports during the following periods:— Months of May, 1939; April, 1939; May, 1938. Five months ended 31st May, 1939, and 31st May, 1938.

PORTS OF :—	CATTLE.						SHEEP.				PIGS.			Horses
	Fat	Stores	Milch Cows	Springers	Calves	Total	Fat	Stores	Lambs	Total	Fat	Stores	Total	
Belfast	3,053	8,031	1,236	136	—	12,456	238	—	3,740	3,978	2,968	—	2,968	519
Larne	—	1,714	—	28	—	1,742	—	—	182	182	1,103	—	1,103	25
Londonderry ...	83	6,770	31	31	2,190	9,105	32	—	916	948	420	—	420	11
Newry	53	253	—	—	—	306	20	—	136	156	—	—	—	—
Total, May, 1939 ...	3,189	16,768	1,267	195	2,190	23,609	290	—	4,974	5,264	4,491	—	4,491	555
Total, April, 1939 ...	4,762	15,609	1,122	109	578	22,180	323	—	395	718	3,709	—	3,709	293
Total, May, 1938 ...	4,074	6,459	1,520	161	299	12,513	441	—	4,187	4,628	5,571	8	5,579	399
Total, Five months ended 31st May, 1939	28,975	77,517	5,545	495	3,828	116,360	8,222	—	5,372	13,594	21,344	166	21,510	1,378
Total, Five months ended 31st May, 1938	25,372	66,247	5,331	460	1,807	99,217	14,153	—	4,414	18,567	39,252	736	39,988	1,338

IMPORTS AND EXPORTS.

Table showing the Imports and Exports through Northern Ireland ports of certain Agricultural Products during the month ended 30th April, 1939, and the four months ended 30th April, 1939, with comparative figures for the corresponding periods in 1938. This information also includes trade with Eire across the land boundary.

(These figures are supplied through the courtesy of the Ministry of Commerce and are subject to revision).

COMMODITY	IMPORTS.				EXPORTS.			
	Month ended 30th April.		Four months ended 30th April.		Month ended 30th April.		Four months ended 30th April.	
	1939	1938	1939	1938	1939	1938	1939	1938
Bacon ... ... cwt.	4,121	4,028	15,512	13,187	46,360	31,740	160,283	116,153
Hams ... ... ,,	795	1,038	3,373	4,919	8,816	9,030	39,053	41,668
Pork ... ... ,,	144	2	715	646	4,878	2,587	15,260	9,588
Butter ... ... ,,	12,128	14,572	51,744	62,977	115	165	542	904
Eggs ... ... gt. hds.	131,686	165,147	349,911	417,362	441,146	468,415	1,099,480	1,061,936
Oat Products (inc. Oatmeal) cwt.	2,238	1,319	10,689	7,102	2,558	4,529	19,085	22,610
Potatoes ... ... tons	111	190	1,122	946	*19,427	*21,809	*55,452	*96,378
Poultry ... ... cwt.	131	164	994	1,082	7,989	7,896	75,893	79,866
Grass Seeds ... ... ,,	1,375	3,779	5,515	10,085	46,027	53,836	156,290	188,230
Cream ... ... galls.	——	——	——	——	†18,926	†21,916	†91,123	†80,481

* These figures represent quantities of potatoes inspected by the Ministry for shipment.
† These figures are compiled from the Monthly Trading Returns supplied by Creameries in Northern Ireland.
‡ These figures do not include direct trade with places abroad.

Table showing the numbers of Live Stock (1) exposed for sale, and (2) sold at 19 fairs in Northern Ireland during the months of May and April, 1939, and May, 1938.

Description of Live Stock.	May, 1939.		April, 1939.		May, 1938.	
	Number exposed for sale.	Number sold.	Number exposed for sale.	Number sold.	Number exposed for sale.	Number sold.
Store Cattle ...	8,593	5,991	7,535	4,921	5,234	2,932
Fat Cattle	1,102	1,003	1,174	1,107	1,036	932
Dairy Cattle ...	1,225	879	1,173	862	1,144	815
Sheep	722	438	642	360	705	444
Lambs	212	144	73	71	244	168
Young Pigs ...	3,310	2,733	2,957	2,165	3,530	2,686

ACCOUNT OF TRADE AT FAIRS.

Supplies of store cattle at Fairs held during May generally showed seasonal increases to a much more marked extent than a year ago. The quality of the stock was in the main fair, but the condition of many cattle was backward, and, although some improvement was made following the more genial weather of last month, the scarcity of grass towards the close was again tending to retard the normal thrive of the animals. In the earlier part of the month trade recovered somewhat with the improvement in pastures, and graziers operated on a larger scale, but more recently the demand has been confined to good strong animals for early finish, as grasslands were deteriorating day by day during the drought, and the future was too uncertain. On balance prices were little changed, as the slight gains recorded for really good animals were offset by some decreases for smaller cattle.

A good brisk demand ruled for fat cattle, which were in smaller numbers than in April. The quality and finish of the beef showed some improvement, and sales were more readily effected at improved rates.

The offerings of dairy cattle showed an increase on the month and on the year. The demand, however, continued dull and sales were slow, except in the case of really good young cows. Towards the close of the month a better tone was noticeable and prices had a slightly firmer tendency.

Sheep and lambs were increased in number at these Fairs, but the volume of business continued on a comparatively small scale. The best enquiry was for well-finished fat lambs.

Young pigs were offered in larger numbers. The demand was generally improved in this section, and prices recorded increases on the month. Store pigs also shared in the better trade, and sold at higher rates. For the medium supplies of brood sows of moderate quality trade was rather slow and prices were inclined to move in a downward direction. Good types of sows of the York breed, however, made firm rates.

12th June, 1939.

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Prospectus of North West School.
Prospectus of Greenmount Agricultural and Horticultural College.
Scholarships in Agricultural Science.
Scholarships in Creamery Management.
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Guide to the Live Stock Breeding Act (Northern Ireland), 1922.

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,, 23 The Handling and Care of Wool.
,, 24 Fluke in Sheep.

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Any of the above publications may be obtained free of charge and post free on application to the Secretary, Ministry of Agriculture, Stormont, Belfast.

The following publications can be obtained from His Majesty's Stationery Office, 80 Chichester Street, Belfast, at the prices stated :—

(1)	The Annual Report of the Ministry of Agriculture for Northern Ireland.	Price, 2/6 net.
(2)	Annual Report upon the Agricultural Statistics of Northern Ireland.	Price, 2/- net.
(3)	The Journal of the Ministry of Agriculture for Northern Ireland.	Price, 2/6 net.
(4)	The Agricultural Output of Northern Ireland, 1925.	Price, 2/6 net.

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